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The Place of the Motion-Picture in Modern Life

C. B. NEBLETTE, A.R.P.S.

SCARCELY one of the millions who nightly patronise the neighborhood motion-picture theaters of America stops to consider at any length the place of the motion-picture in modern life. Yet the motion-picture exercises a powerful influence over the thought and manner of life of the American people—an influence which is all the more powerful because owing to its subtile nature it is largely unrecognised. Under the guise of entertainment the motion-picture has undoubtedly become one of the great social and educational agencies of the present day. And this statement is made with due regard to the merit or otherwise of much which finds its way to the screen. Although considered generally as a mere pastime, a means of entertainment, or with withering scorn, and as the source of numerous social ills, the motion-picture is one of the serious forces of the twentieth century.

For the motion-picture is not merely a fortunate accident, a lucky invention that pushed by widespread advertising happened "to catch on". The motion-picture, like the railroad, was a natural outgrowth, an inevitable development which was rendered necessary by existing conditions.

Just as the railroad had come in response to the demand of the American people for more adequate and efficient transportation between the far-flung settlements of our broad domain, so at a later date the motion-picture was to make possible for the people the dramatic and emotional recreation which had formerly been possible only for those of the larger cities and towns.

Democracy in educational, cultural, social and economic advantages, as well as democracy in a political sense, has always been a characteristic of the American people. Consequently, the educational, social and economic history of the American people has been towards a more equitable distribution of these advantages among the people, of finding agencies to bring together on one common ground of mutual interest all of the classes of the people in all parts of the country and rendering available to every citizen opportunities equal to those of every other citizen. Owing to the conditions surrounding the early life of the nation; its citizens engaged in a constant struggle with nature, with constant shifting of population, with sparsely settled communities faced with the hardships, the privations of pioneer life, the older forms of art had never gained a firm foothold in the hearts of the American people. Only in a few of the larger cities had a beginning been made in the development of those arts which form such an integral part of the social and intellectual life of even the smallest European centers. American cities larger than many a European town which boasts of a municipal dramatic company, a municipal opera company and the like, were dependent upon the traveling stock-companies with their threadbare plays, third-rate players and antiquated scenery; and the more remote, yet prosperous, communities were deprived almost completely of even these advantages.

To render inexpensively to the many that which had formerly been possible only to a select few; to bring to the smallest hamlet dramatic productions hitherto possible only in the larger cities; to provide the citizens of every nook and corner of America with proper emotional recreation of the splendor and magnificence heretofore possible only in the metropolitan centers was the province of the motion-picture. Because it filled a long-felt need admirably and completely; because it brought to the rank and file of the American people the dramatic entertainment which had been beyond their reach; because it bridged one more point of cleavance between the larger cities and the small

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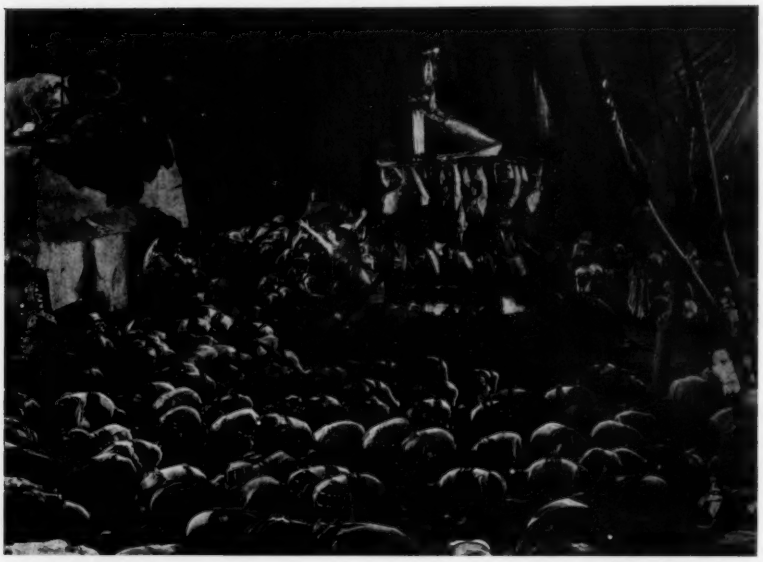


A Paramount Picture

THE CHILDREN OF ISRAEL BOW TO THE GOLDEN CALF
SCENE FROM "THE TEN COMMANDMENTS"

towns and rural sections; the motion-picture, even in the crude state of its early beginnings, had a powerful and magnetic fascination for the American people.

The rapid growth of the motion-picture in popular favor is eloquent indication of the fact that it does fill a very real need in the social and recreational as well as the educational life of the people. From a position of comparative obscurity the motion-picture sprang overnight into public favor to such an extent that the resources of the infant industry were overwhelmed. So incessant was the public demand that producers worked night and day, with might and main, to supply the evergrowing market. Those were the days when enterprising and ambitious men made fortunes with an investment of a few hundred dollars. Picture play-houses sprang up everywhere. The pictures which these early patrons saw were trivial and crude; but, in spite of this, they possessed an attraction for the public which would not be denied. Today, statistics tell us that more than $1,500,000,000 is invested in the industry, which employs more than 300,000 people. Last year (1924–25) exactly 803 major productions were issued with an average cost of from $150,000 to $200,000. There are nearly 20,000 motion-picture houses in these United States with an average weekly attendance of approximately 50,000,000 or nearly one-half of the total population. Could such a tremendous following exist if the picture-play did not fill a very important need in the life of the people? Can it be without influence on the thought and life of the people? Hardly.

The motion-picture has given to the American people an understanding of the drama, of stage-craft, of acting which they would never have had without it. No longer are most of the people wholly dependent upon the occasional visit of a barnstorming company with its low artistic standards. No longer do third-rate actors and crude and dilapidated scenery set the dramatic standard in all but the largest metropolitan centers. For it is one of the great advantages of the motion-picture that it is everywhere and always the same. Owing to large-scale production and distribution a producer may employ in one cast an all-star company which would be the despair of any theatrical producer.

A year or more may be spent in production; the world may be searched for the proper settings for the various scenes. Altogether a hundred times as much money and more time and effort may be expended than on the most pretentious Broadway production, yet, the resulting film goes easily in a small tin-can and is shown in identical form on the same night in a dozen or more places. Esthetes dwelling in their palatial mansions may deplore this democratisation of the

drama. They may insist that it leads to coarseness and degeneration. They forget that ready accessibility never hurts a real work of art. They forget that a large part of the history of art has been the tendency towards the development of agencies for reaching the larger number of people. True merit, intrinsic worth, is not dependent upon exclusiveness.

The motion-picture has opened the eyes of the American people to the romantic history of the North American continent. "Miles Standish", although a financial failure, re-created the romance of the Pilgrim fathers, the Plymouth settlement; "America" the stirring days of the Revolution, the stand of the Minute Men at Lexington who

"By the rude bridge that arched the flood

* * * * * * *

Fired the shot heard 'round the world."

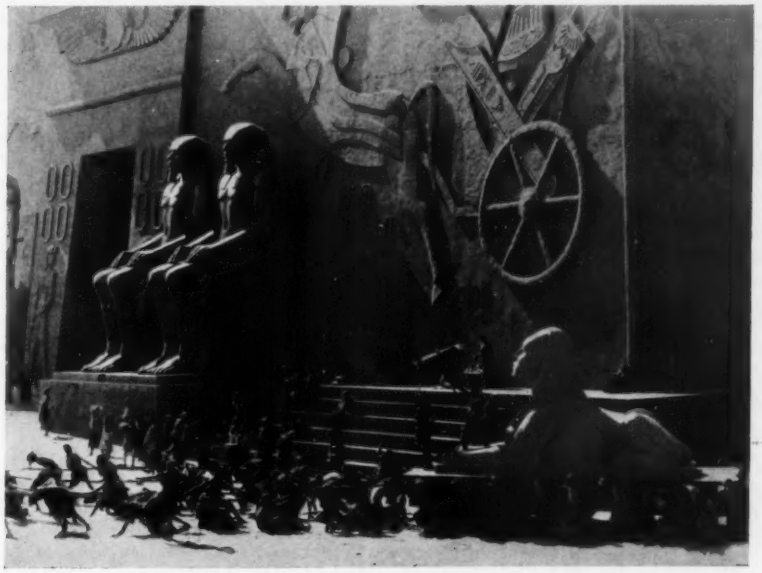
"The Birth of A Nation", the spectacle of a nation divided against itself, the horrors of civil conflict, of brother against brother, the fusion of a nation amid the camp-fires of a civil war; "The Covered Wagon", the epic of a race, forever pushing westward to

"Fresh fields and pastures new."

"The Iron Horse", the romance of the American railroads, the union of the country by linked bands of steel; all these and unnamed others by depicting vividly and graphically the various phases in the history of the country have awakened in the American people a new interest in their own country, in its romance and its history, and have been instrumental in developing a new sense of national consciousness.

In like manner the motion-picture has enabled the people to visualise the life of earlier ages and peoples. By re-creating, always under the guise of entertainment, the conditions and times under which men have lived and played their parts in the history of the world, it has developed a more perfect understanding of the long, slow and tedious stages through which society and civilisation has progressed to its present stage. By so doing it has enabled us to grasp more fully the preciousness of our present civilisation, has given us a new understanding of humanity, of man's responsibility to man, and is promoting that understanding between nations and races which is the basis of all efforts at international peace.

The picture-play is also instrumental in developing an acquaintance with and an appreciation



A Paramount Picture

THE ISRAELITES LABORING UNDER EGYPTIAN BONDAGE
SCENE FROM "THE TEN COMMANDMENTS"

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for the literary classics. The picture-play version of "The Hunchback of Notre Dame", for instance, reached thousands who would never read Victor Hugo's immortal classic and the same is true of "The Three Musketeers" and numerous other picture-versions of the classics of literature.

Although it is undeniable that a reading of literary works is necessary to the development of literary taste and true appreciation of literary values, yet, that acquaintance with the classics which is gained from the picture-play version is not to be despised; but, on the other hand, it is a very real aid towards the appreciation of the best literature.

The film is also a potent factor in foreign trade. Although in the past trade has largely followed the flag, in the future trade is more likely to follow the film. We who are not essentially a nation of traders have not yet recognised the very important place which the motion-picture is playing in international commerce. Other nations, particularly the British, realise this fact, however, and have made, or are now making, steps to combat the effect of the American-made film on their trade. In Britain, the fear has been expressed more than once that the world may be Americanised by the American-made film. American-made telephones, automobiles, typewriters, shoes, clothes, all the thousand and one things which are an integral part of American life are slowly but steadily making their way into every nook and corner of the civilised world. That the British realise the seriousness of the situation as it affects their industry and trade is evident from the more or less recurrent attention given the matter in Parliament. Evidence has more than once been brought forward to show that the presence of the American film in the Colonies and even at home has led the people to demand the American products illustrated in the films in preference to those of the Mother Country. In response to this demand many British manufacturers have been forced to alter their plants to produce articles in conformity with the American product or to operate under considerable handicap. So serious is the matter from the viewpoint of British industry that all sorts of alternatives have been discussed in Parliament, even to the extent of barring American films from the country. Although it is unlikely that such a policy will be adopted, we may expect to see opposition of some sort in the future.

When knowledge is imparted in the usual manner the mind is called upon to form a mental picture of the idea presented. This is not always a matter easy of accomplishment and if the wrong mental image is formed grave injury is done, for impressions once fixed in the mind are difficult to remove. Textbooks may be written in the simplest of terms and the most precise language and yet fail to convey the exact meaning. Carefully prepared lectures may likewise fail to impart a definite mental image and there is always the danger that an incorrect conception of the matter will be formed. The motion-picture is less open to these objections than any other method of imparting instruction with which we are familiar. With the motion-picture, if the subject is presented in the proper manner, not only is the mental image more easily formed in the mind of the student but there is practically no danger of misconception or partial understanding as with the printed or spoken word. After all, words, either printed or spoken, are only the means by which we convey to one another our impressions of things. The first written language was a picture-language; and although the alphabet is more convenient and flexible than any form of picture-writing, pictorial methods of imparting knowledge are always the more vital. Pictorial representation by means of the motion-picture is thus the most effective means of imparting knowledge which we possess. Unlike the printed or spoken word the motion-picture recognises no frontier of language or nationality. It makes no distinction between nations or races. It is everywhere understandable and is thus the most universally applicable agency of instruction known to the world.

A field of the motion-picture of which the public hears but little is its applications to scientific research. This is a broad and rapidly expanding field with numerous branches, such as for example, slow-motion kinematography for the analysis of motion, micro-kinematography, or motion-picture photography through the microscope, X-ray kinematography, electric-spark kinematography and many others. Among the many subjects which have been investigated with the aid of micro-kinematography have been the effect of repeated stress on various metals, the development of the embryo chick, the activity of the white and red corpuscles in the human body, the life-history of injurious bacteria and the effect of various serums and antitoxins on the development of bacteria in the system.

The eclipse of the sun on September 10, 1923, was recorded from beginning to end by the motion-picture; and, weather-conditions permitting, the same will be done at all future eclipses.

By means of the motion-picture film it is possible to reproduce the phenomena recorded at any future time and for as many times as may be desirable for minute examination and discus-

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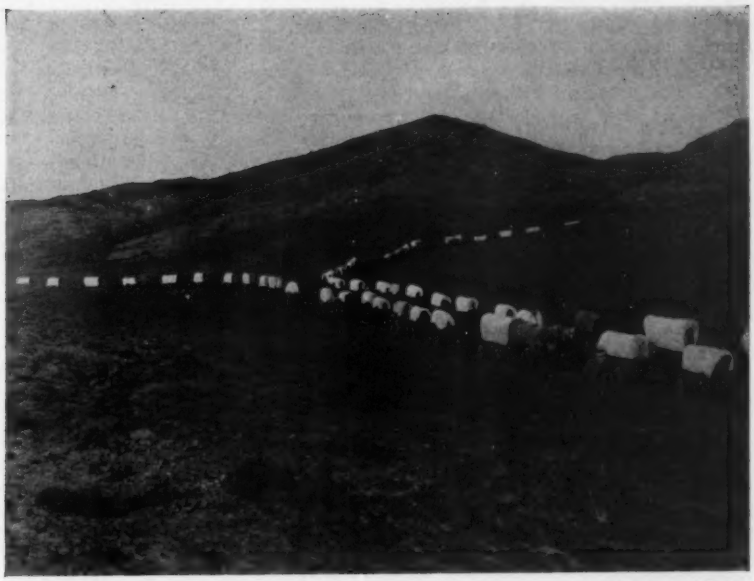

A Paramount Picture

THE TRAIL DIVIDES — SCENE FROM "THE COVERED WAGON"

sion. Things will thus be observed which in the few short moments of a total eclipse would have escaped observation altogether. Furthermore, it becomes possible for workers at various stations to exchange and compare results.

In various other ways the motion-picture is proving to be a very valuable assistant in scientific investigation and new applications are being found constantly. Although such films may reach the public only at long intervals, they are none the less important, so intimately connected is modern life with scientific research.

We hear a great deal in these days of jazz and bootleg-liquor of the effect of the motion-picture on the social life of the people and particularly the attitude of the youth. A great many who deplore the excesses of the time, the lapses from the old, established customs and ideas of society, are disposed to see in the motion-picture the source of that disregard for moral values which lies at the bottom of the more or less hysterical life of the time. This revolt of youth against long established precedents, however, is more deeply seated than this. No one agent is responsible for the flaunting disregard of the established ideas of our parents. It is the result of social and economic movements which have, in the course of the years, about reached their climax. The things which we condemn in contemporary society are *expressions* not sources, of a changed viewpoint.

It may be said at once that not all that the motion-pictures have presented in the last few years has been absolutely defensible from a moral standpoint. In some few cases productions which have attracted the widest popular attention and have returned the largest profits to their makers have been those which thoroughly deserve condemnation. But on the whole the screen has preserved a much cleaner aspect than the stage or our periodicals and fiction. Although Broadway has been flooded with "girl shows", with an avalanche of nudity, vulgarity and open undisguised indecency; while our current periodicals and popular fiction have contained a large amount of salacious material, the motion-picture has given to the world such productions as "The Ten Commandments", "The Covered Wagon", "America", "Scaramouche", and many others. These pictures and others of similar caliber have drawn millions and were exceedingly profitable for the producers. From present indications, the next year or two will see a very definite trend towards historical and biographical subjects as central themes for the larger productions. Producers are trying hard to get away from sex-plays

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and daring exposures. To do this, the field is developing into three distinct classes: comedy, frank melodrama and stories of an epic largeness with a historical background. The turn to the last-named class is due largely to the popular success of such productions as "The Covered Wagon", "The Iron Horse", "North of 36", "The Pony Express", and so forth.

With further reference to the social influences of the motion-picture, an incident may be mentioned which took place in a conversation with a man who has charge of a motion-picture theater in a small town in the ranching country of western Texas. He said, "Tell 'em the movies are here to stay. Look up the street there. You can still see the signs on two or three buildings which used to be saloons or gambling-places. There were several more, but the buildings have been occupied by others who have torn down the old signs. Before I opened up this show, those were the only places in this place a man could go when the day's work was over. When I opened this place, men who had never been keen about saloons or gambling-places, but had frequented them because they were the only places to go, began coming here instead. Others followed and soon all but a certain set were coming more or less regularly. Even before the War and prohibition some of the saloons had to close down because they didn't get enough trade to keep a'going and I think this show had a lot to do with it. Yes, sir. You can tell 'em that the movies are here to stay."

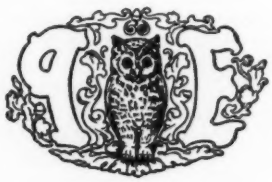
The theater to which he referred was a small, frame building unfinished on the interior and with open spaces closed by board-shutters in place of windows. It was without paint and ordinary household chairs were used. It was far removed from the elaborate picture-palaces of the cities, or the neat little theaters of the towns; but one could readily believe from the enthusiasm of the people who attended that it had been an important factor in the social life of that small village situated in the western ranching-country almost one hundred miles from a railroad.

The picture-play is nothing less than a new art-form, a new method of story-telling. As such, it has had to develop its own technique. It has had to develop and perfect its own resources. Unlike the established arts, it has been forced to rely entirely upon the appreciation of the general public. The motion-picture has had no influential class, no organised and interested group on whom it could depend for support. It has flourished, or it has failed, as it appealed to, or failed to appeal, to the average man. Progress has only been possible as the intelligence and artistic appreciation of the general public progressed. Enterprising directors who aspired to noteworthy productions, which set a new standard in the history of the art and were artistic achievements of a very high order, found themselves financially embarrassed for their labors, simply because the body of the people, on whom the success of their endeavor rested, were unable to appreciate their productions. In most cases, those productions which represent the greatest single steps forward in the history of the art have been failures with the public. No producer is in the position of an endowed institution. His productions must be remunerative or he simply cannot exist and they cannot pay unless they are appreciated by the general public.

To judge the motion-picture by the worst or even the average of its past productions would hardly be fair. No other art could stand the test, much less an art still in its infancy and busily engaged in working out its technique.

Now that audiences are growing more critical and better informed and now that there is a better understanding of the technique of the screen and of adapting material for the picture-play there can be but one end—a higher standard of artistic excellence.

As America is the country for the common man, so is the motion-picture the art-form of the common man. With its place secure in the hearts of the people, it carries with it the future of a young and a vigorous nation. A national art. Long may it prosper!



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MY REDBUD — BENJAMIN WALLACE DOUGLASS

Tree-Portraiture

BENJAMIN WALLACE DOUGLASS

A FRIEND was looking over some prints in my studio the other day and seemed very much interested in a group of tree-pictures. Turning to a picture of the Redbud tree that stands by my door I remarked, "Here is one that I always liked".

Hesitatingly, she replied, "No, I don't think I care for that".

"Why not", I asked.

"Because", she said, "it does not show the whole tree".

That, I find, is a very common basis of judgment used by many who are unfamiliar with both trees and pictures. As a matter of fact, there is no more reason for showing the "whole tree", in most cases, than there is for showing the whole man when we attempt a portrait of an individual.

The picture of the Redbud tree was a true portrait of that particular tree and a far better picture than it would have been if I had endeavored to show every twig even to the top-most bough. No tree is more beautiful than the Redbud when it is in full bloom; but this beauty can only be caught in black and white when we come close to the subject. If we move back so as to include the entire specimen we lose the effect of light and color which we must have if a true portrait is to be presented.

By making a close-up of this particular tree I had lost nothing of its character; and in any sort of portraiture it is the character we are after rather than the mere physical anatomy. A Bertillon photograph is one thing and a portrait is "something else again". Just now I have in mind portraiture—tree-portraiture.

Another of my pictures that I have before me—I do not know just how many of these the editor will reproduce, so I hesitate to make specific references—shows two large Beech trunks. It is a portrait of Beech trees truly enough, although none of the top branches show in the print. Still the essential character of the Beech is presented—the gray trunk, the habit of growing on a slip-

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THE BEECHES BENJAMIN WALLACE DOUGLASS

ping surface, the typical droop of the branches, all mean Beech to anyone who knows that tree. Even the way in which the sunlight filters through the leaves and splashes down the hillside is shown and it is all a part of the picture when we think of Beeches. A professional forester might object because the quality of timber contained in those old trunks could not be estimated from the photograph. At least one of them may be hollow in the center with an opening near the base and the forester would want to know that. However, there are not many foresters in the country, and the people who enjoy my pictures probably love the Beeches for their beauty more than for their utility.

I suggested that there might be exceptions to the general rule of making close-ups of trees if we would show the true character of the subject. All rules have exceptions, at least all rules in art —I am not so sure about mathematics, although an Indiana legislature did attempt to change the value of pi to an even three in order to make calculations more easy.

As in human portraiture the photographer of trees should know something about his subjects before he attempts to reduce them to paper. He should at least study them long enough to know their characteristics and then do his best to make a permanent record of those characteristics.

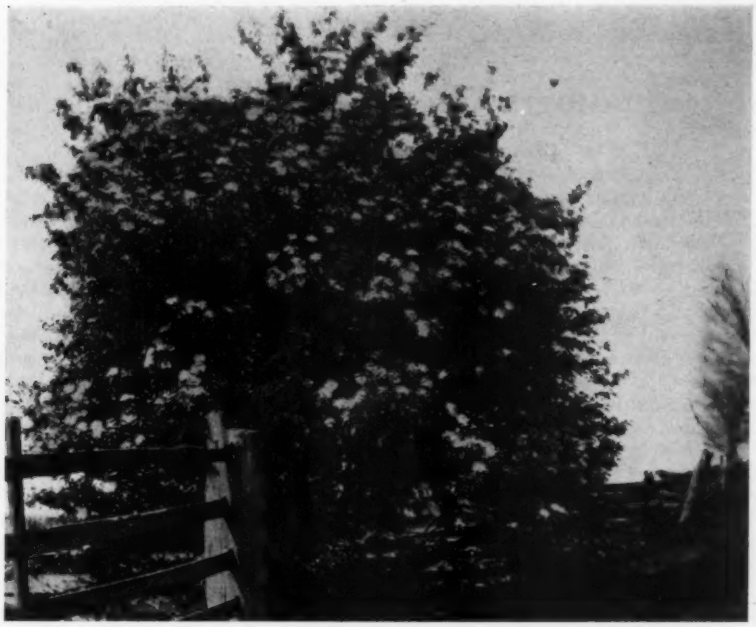
The Ash tree is one that cannot readily be portrayed in a close-up. The trunk of the Ash may be confused with several other species—particularly with some of the Hickories and we must go higher in order to find differentiating qualities. In the case of the Ash these are found in the upper branches. No other tree in full foliage shows its frame-work as the Ash does and so we must back up far enough to enable us to reveal the slender branches showing through the leaves.

The Monteray Cypress is another tree that must be—in most cases—photographed "in whole" because no close-up will show its wind-tortured top.

Individual trees of any species may sometimes have to be photographed entire for particular reasons. Here in Brown County, Indiana, we have the largest artist-colony in the East, except for a few groups along the Atlantic coast. As a result, our hills have been pretty well painted and the workers with the brush have sought out certain spots, certain roadways and certain trees to be used as subjects. It is characteristic of the human animal to herd together.

Every fellow wants to do the same thing his neighbor does, whether it is a good thing or not does not greatly matter.

In consequence of this herding instinct, the artists have without exception, I think, painted one particular tree which they call "the graceful Sycamore". A new member of the colony can scarcely be recognised until he has made an attempt at this tree. Some years ago one of the pioneer artists, and a good painter at that, won a medal for a picture of this tree. That, presumably, started the fashion.



BLACK-HAW GROWS IN THE FENCE-ROW BENJAMIN WALLACE DOUGLASS

Now, it should be remembered that a painting is one thing and a photograph is something else. A tree may lend itself to the brush and not be at all adapted to the lens, and this is true in the case of "the graceful Sycamore".

The tree is graceful all right; but it is not a fit subject for photography. In the first place, it is not a first-class Sycamore at all; and, in the second place, it does not grow in the sort of place we should expect to find that variety of tree. It grows by the side of a dry branch of a stream in what appears to be a bare field, and we all know that a Sycamore should be at the side of a living stream; it should have a bit of Virginia creeper growing on its trunk, and about its roots should cluster wild plants, thick and rank from the rich soil of the river-bank.

There are a lot of such Sycamores in Brown County; but the artists overlook them and paint instead this rather wrigley specimen in the open. The typical Sycamores can be portrayed by a close-up for all of their rugged character is concentrated in the sturdy trunk and a few large branches; but "the graceful Sycamore", must needs be portrayed in whole—and then we have merely a record of the bare bones of the thing the artists have been working with, clothing with life and beauty through their plastic medium.

Often, in making a portrait of a tree we must include something of that tree's environment. Certain trees grow in certain places and the character of the tree cannot be completely shown unless we, at least, hint at the kind of localities it enjoys. The Black-haw, one of the viburnum family, is typical of fence-rows. Its fruit is relished by the birds and they are prone to sit upon fences while they eat their luncheons, scattering the refuse seeds as prodigally as any

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picnicker. Most trees that bear fruit attractive to birds will for this reason be common along fence rows—Black-haw, Hackberry, Wild Cherry, Dog-wood, bird-trees are fence-row trees.

So in a portrait of a Black-haw a short stretch of rail fence is not out of place because it all combines to indicate the real character of the tree.

It annoys me sometimes to have people look at a picture and exclaim, "Oh, where did you make that?" A good tree portrait need not be localised. It should so completely show the tree that it might represent any good example of that particular species. A portrait of a Beech should be characteristic of Beech trees as a whole, and not merely represent some individual Beech standing on some particular parcel of land.

I have said nothing of the mechanics of tree-pictures because mechanics are the same regardless of the sort of photographs you desire to make. The selection of equipment is a personal matter and the cameras I use and the methods of development and printing have little to do with the results obtained.

The thing the tree-portraitist should learn is that his work requires him to be something of a mixture of botanist, artist and photographer—he can spoil the whole picture if he fails in any one of the three branches.

Photographing the Yellowstone

Part III

LLOYD W. DUNNING

THE Grand Geyser is described as being one of the most beautiful examples of geyser-phenomena in the world. It erupts, as stated above, every ten to fourteen hours, playing to the height of two hundred feet, for a period of about a half hour. The hot water is not thrown upward in a single column like most geysers, but sprays out like an immense fountain. It has no crater but, like the Daisy Geyser, issues directly from a hole in the ground. For perhaps ten or fifteen minutes preceding each eruption, sounds like distant explosions are heard beneath the earth, each sound being accompanied by a distant shock like a feeble earthquake. This noise, scientists tell us, is caused by the collapse of great steam bubbles preceding the eruption.

The next morning an eye-witness told me the Grand had erupted at seven forty-five P.M. just three-quarters of an hour after we left. Keeping this in mind, we were on hand at the Grand, at five-thirty P.M. with the movie camera. This time we were not disappointed. At the hour of six-fifteen P.M. sounds like distant cannons being discharged were heard beneath our feet, while the water in the hole of the geyser rose and fell in gentle undulations. At six-thirty, the Grand went up with a roar. Descriptions of the geyser were far from being exaggerated. It was a truly marvelous spectacle to witness—the gigantic fountain of hot water and steam, rising fully three times as high as the pine trees. I obtained some fine pictures, using stop F/11. Stop F/16 would ordinarily have been used but for the lateness of the hour. The pictures turned out well in every respect.

There is no use denying the fact that, for geyser-photography, the motion-picture camera is far superior to any still-camera; but, in spite of this fact, I used the still-cameras quite often for geyser-photographs. I obtained a stereoscopic picture of a small geyser known as the Handsaw, which proved to be very pleasing when viewed through the stereoscope. This little geyser plays to a height of twenty-five feet at various times, making a roaring noise. The Stereo-Kodak was set up about twelve feet away, stopped down to F/11, and a picture made at 1/100 of a second. The motion of the water was not entirely stopped at this speed; but there was just enough blur to the water to give the impression of motion. When viewed through the stereoscope, the water-column stands out in bold relief against a dark background of pine trees while many little drops of water seem suspended in the air as if by some mysterious force. Practically all the geyser eruptions made with the movie camera were also snapped with the still-cameras, with the single exception of the Castle, which never erupted again while we were there.

There are several attractions in Yellowstone Park in which motion-pictures are not of much value. One of these is Morning Glory Pool. This beautiful, quiescent hot spring is a funnel-shaped bowl in the earth, about twenty or thirty feet in diameter and twenty-five feet deep. This cavity is filled to the brim with perfectly transparent water of a deep blue tint. The spring is well named, as it looks exactly like a morning glory. No camera of any description could do it justice, but the stereo-camera renders it more perfectly than any other. Two exposures were

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made with the Stereo-Kodak, one close-up and the other a little farther away. Realistic as the stereo is, it is inadequate to reproduce the Morning Glory. It must be seen to be really appreciated. The color is so exquisite and delicate that no artist could ever reproduce it as it is. Even autochromes or color-plates would fail to render it exactly as the eye saw it.

Brevity compels me to omit many things of importance, but, if I were to include all our adventures while photographing the Yellowstone, a small volume would be the result. However, two or three things might be mentioned before proceeding further. One concerns the Giant Geyser. This geyser, the highest in the world, erupts to a height of two hundred and fifty feet at intervals of from six to fourteen days. The eruption lasts an hour or more. According to latest reports, the Giant was due to erupt at any time, as eleven days had elapsed since its last display. To make a long story short, I waited three days to photograph the Giant in eruption, but failed. I went to the geyser early each morning and left late in the evening, for three days in succession, but no eruption occurred. During my monotonous waits for this geyser, I read three books and consumed numerous boxes of cookies. The only pictures I obtained of the Giant were a few views of the steaming crater, which looks very much like a huge, hollow stump protruding above the ground.

One disconcerting incident occurred while I was making a stereo of Sapphire Pool. This is an immense hot pool perhaps fifty or sixty feet in diameter, filled to the brim with hot water the color of a sapphire and of such transparency that the bottom, which is perhaps forty feet down, is plainly visible. Two large black openings are seen at the bottom, probably leading to some larger cavern of unknown extent. The camera was set up near the edge, and to catch some low lying clouds in the sky, I slipped two sky-filters over the lenses. Suddenly, without warning, Sapphire Pool boiled up and started to overflow. Fearful of being scalded, I picked up the camera and tripod and leaped to safety and, in my haste, one of the sky filters fell into a small puddle of hot water near the edge of the large pool. I snatched it out instantly; but not quickly enough to save the filter from permanent injury. This incident proves that one must watch his step in this uncanny region. However, this is the only accident to mar our whole trip, so we consider ourselves lucky.

One more thing deserves special mention before we leave Upper Geyser Basin for Yellowstone Lake. This concerns Burning Pool. This hot pool is a real curiosity as, true to its name, it seems to be on fire. What appears to be large bluish flames, issue from two fissures in the bottom of the pool. This phenomenon occurs about every fifteen minutes, the "flames" appearing small at first but continuing to grow larger until they fairly leap toward the surface. With the starting of the "flames," the pool grows slightly agitated, becoming more so until it boils so violently that the "flames" are no longer visible. Early explorers actually thought that internal fires were visible here; but what appears to be flames are nothing but bubbles of bluish gas, so highly reflective that they appear luminous. The illusion of flames is so perfect that it is difficult to believe them otherwise. I was quite successful in photographing this pool with the Ciné Kodak. Choosing the proper exposure was more a matter of guesswork than anything else; but I happened to guess about right, as a fine picture was obtained using stop F/8.

The next morning found us on the road again, traveling towards Yellowstone Lake. On the way, Kepler Cascade was passed. We stopped here long enough to make ten feet of movies and several stereos. In making the stereo-pictures, it was necessary to stop down to F/32 to obtain the required depth of focus, since stereo-pictures must be sharp, both in the foreground and the background, to be successful. Using this stop meant an exposure of 1/5 of a second. As the tumbling waters of the cascade would have resembled frozen buttermilk, in a picture which had been timed 1/5 second, I decided to use the old stunt of snapping the shutter several times at one twenty-fifth of a second, instead. By snapping the shutter five times, I obtained my 1/5 second exposure without losing any of the life in the moving water. This stunt can only be worked, however, where there are no trees or shrubs to be swayed by the wind, or at such a time when there is no wind.

Farther on, we crossed the Continental Divide, at an elevation of 8,240 feet above sea level. Here is Isa Lake, whose waters flow to both the Atlantic and Pacific oceans. Movies and stereos were made here. The road, from this point on, descends gradually and the middle of the afternoon found us at West Thumb Bay of Yellowstone Lake.

We paused only long enough here to replenish our food-supply and to explore a little. At this place was a small geyser known as the Lake Shore, some hot springs and a basin of boiling clay known as the Thumb Paint Pots. The famous Fishing Cone is also at West Thumb. This cone rises from the bottom of the lake near the shore. In its center is a hot spring. In times past, fishermen caught their fish here,

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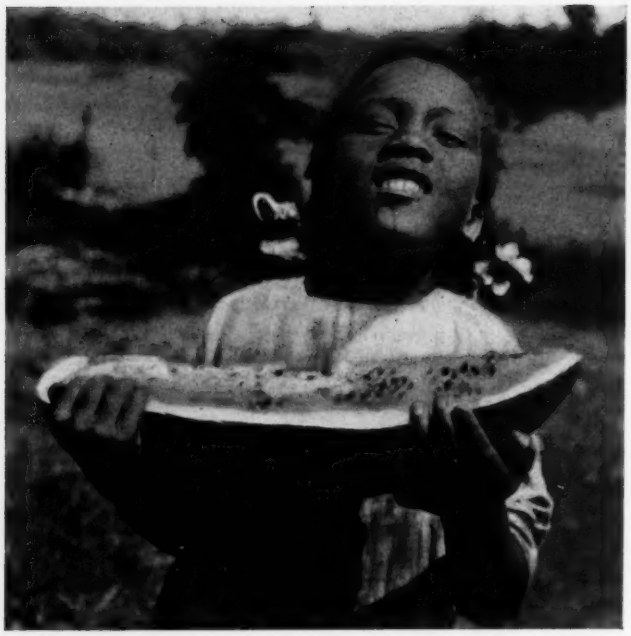

"SHO' AM GOOD!" BURTON SLADE, JR.
HONORABLE MENTION—PICTURES OF CHILDREN

dropped them into this cone and boiled them while on the hook—a practice now prohibited.

On the way to the camp at Lake Junction, some seventeen miles farther on along the lake shore, we passed the Natural Bridge. This freak of nature is situated high up on a bluff, and appears quite symmetrical, the abutements being about thirty feet apart.

Late in the afternoon we arrived at Lake Junction. Here is Yellowstone Lake hotel and the auto-tourist camp. At the latter place we set up camp for a few days' stay.

The following morning after breakfast, I gathered up the two stereo-cameras and the light tripod, and set off to make a few pictures of Yellowstone Lake. There appeared to be no particular difficulty about photographing this lake as, aside from its deep blue color and mountain-rimmed shore, it looked much like any other lake, though more beautiful than the average. Yellowstone Lake, however, has the distinction of being one of the largest lakes, at its elevation, in the world, having an area of one hundred and thirty-nine square miles and being situated at an elevation of 7,741 feet above sea-level. It is bounded on the east by the snow-capped Absaroka mountain-range, whose peaks rise to the height of 11,000 feet. The shore-line of the lake is very irregular, having a shape very much like that of a human hand.

While making photographs of the lake, I noticed a fast motorboat cutting across the broad expanse of blue water. The sight was fascinating and, after gazing at it for a few moments, the idea occurred to me that a few motion-pictures made from this speeding boat, would be very effective. Accordingly I headed for camp and the movie camera. Arriving there, I broached the plan to my wife and, as a result, five minutes later found us headed for the boat-dock with the Ciné Kodak and tripod.

The boat, in the meantime had returned, and I was successful in chartering it for a half hour's trip. After climbing aboard, the pilot threw in the clutch, and we were soon speeding over the dancing waters of Yellowstone Lake, at thirty-five miles per hour. I was not over-confident as to the success of the resulting pictures, for I found to my dismay, that the motor imparted quite a little vibration to the hull. I was afraid this would shake the camera so much that the pictures would be blurred. There was no alter-

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AN UNWILLING MODEL — BRUCE METCALFE
HONORABLE MENTION—PICTURES OF CHILDREN

native, however, so I set up the camera and cranked away five feet of film on the fast-receding wake of the boat, using stop F/16. Two or three miles farther on we passed Stevenson Island, which gave me an opportunity to photograph this rare bit of scenic beauty as it slipped rapidly by us. Stop F/11 was used for this. Many other views were made from all sides and, by the time our half hour was up, I had used all the remaining film in the camera. These pictures from the boat came out good, very little trace of the vibration being noticeable.

A day or so later we left Yellowstone Lake, heading for Grand Canyon, some fifteen miles beyond. On the way there, the Mud Volcano was passed. This volcano, the last eruption of which occurred in the year 1898, appears as a seething, boiling mass of thin, grayish mud in a crater of perhaps thirty or forty feet in diameter. As this volcano is of a dark grayish character, I used stop F/8 in photographing this with the movie camera, even though the sun was shining brightly. This exposure seemed to be about right, for the pictures were fine.

A few miles farther on, the Yellowstone River, which we had followed since leaving the lake, narrowed down, forming the rapids above the Upper Falls. We stopped here to "shoot" some more movies. A short distance below the rapids came the Upper Falls of the Yellowstone, with a drop of one hundred and nine feet. These falls, although not very high, are nevertheless attractive, and the Government has built several observation-platforms here, so they may be viewed to greater advantage. Here again, the Ciné Kodak was set up and several views taken at F/11.

We drove on perhaps a half-mile farther, when a dull roar reached our ears. A sign-board informed us we had arrived at the Lower Falls of the Yellowstone. We found, however, that they were not visible from the roadway. To view them it was necessary to climb down a series of wooden stairways to a platform at the brink

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of the Falls. After one look at the stairs, zigzagging their way down the side of the hill, until lost amid the rocks and trees, my wife decided not to try it, so she went back to the car while I started down. Several minutes later I arrived at the top of the Falls, rather short of breath; but, after a brief view of these famous falls of the Yellowstone, I felt repaid.

The Falls are surely an awe-inspiring sight. The foaming Yellowstone River, rushing from between pine-clad hills, narrows in at the top of the Falls to less than one hundred feet in width. Here, the seething waters hesitate a moment and then, with a mighty roar, plunge three hundred and ten feet down into the canyon. The magnitude of this inspiring spectacle leaves one spellbound with sheer admiration.

(*To be continued in November issue*)

Example of Constructive Art in Business

CHARLES A. HARRIS

FOLLOWING the coast-line of California from the north, the course is south-southeast as far as Point Conception, where for about one hundred miles it runs due east. Upon this shore with southerly exposure and sheltered from north winds by surrounding hills and the Coast Range of mountains, seemingly an ideal arrangement to produce equitable climate, was founded the little city now recovering from recent calamity of earth-shocks. The site, originally occupied by a considerable village of Indians, was discovered by Spanish explorers from Mexico, Rodriguez Cabrillo being the first in 1542, just fifty years after Columbus. Next came Sebastian Vascanio in 1603 who named the bay and town, made maps and gathered information. The first settlements of the region by Europeans, however, were made through the efforts of the Franciscan Friars who successfully established the now famous Missions during the latter part of the 18th century, and gathered about each one, the Indians of the neighborhood for such civilizing benefits as could be assimilated. Father Junipero Serra was the devoted leader and inspiration of this movement. For protection, the Presidio or fort was usually established in the vicinity of each Mission under military control. The Mission and Presidio; then followed the Pueblo (village). From such beginnings California, especially the southern half, gradually developed through settlement mainly of Spanish speaking people and so continued up to the years of the gold discoveries. "Sixty years of the best of old Spanish and the wildest of new Spanish!" writes Helen Hunt Jackson in "Ramona." "Wholly generous and free handed was the life led there by Mexican men and women of degree in the early part of the nineteenth century under the rule of the Spanish and Mexican viceroys, when its old name New Spain was an ever-present link and stimulus to the warmest memories and deepest patriotism of its people. It was a picturesque life with more of sentiment and gayety in it, more also that was truly dramatic, more romance than ever will be seen again on those sunny shores. The aroma lingers there still—in fact it can never be quite lost." Another writer on the subject says: "The history of the early days of Santa Barbara arouses a special interest as this city is one of the few in the United States founded by an alien race. The Spanish introduced into the southwest a style of architecture superior in unaffected beauty."

Getting along with our subject we have everywhere become more or less acquainted with beautiful and artistic homes and their equally attractive gardens; but the idea of building a business-district in what is called uniform architecture, under capable supervision, so that a degree of harmony in size, design and color prevails and is said to be unique and seldom possible. A good beginning, at least, has been brought about owing to the demolition caused by the tremor and the necessity to begin all over again—also a sentiment agreeable as to the general results to be attained. Following in line with traditions of the place, the style is adapted from the Spanish Colonial or Mission architecture which includes, as will be noticed, numerous arches, arcaded fronts, tile-roofs and also many tiny balconies and outside window-draperies. The essential features of the original type consisted of very heavy adobe walls which were sometimes, but not always, plastered smooth and whitewashed, the roof being covered with red-tiles. In this connection the picture entitled De la Guerra Mansion is thus described by a visitor in 1836: "The house was of adobe, low, with a wide veranda on three sides of the inner court and a still broader one across the entire front (this last has been removed). The verandas on

FEATURING THE BALCONY
THE VERANDA
CHARLES A. HARRIS

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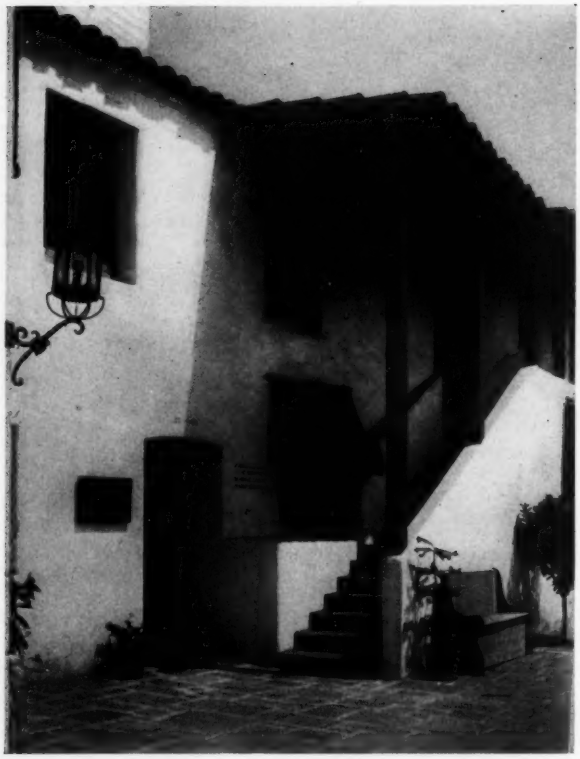
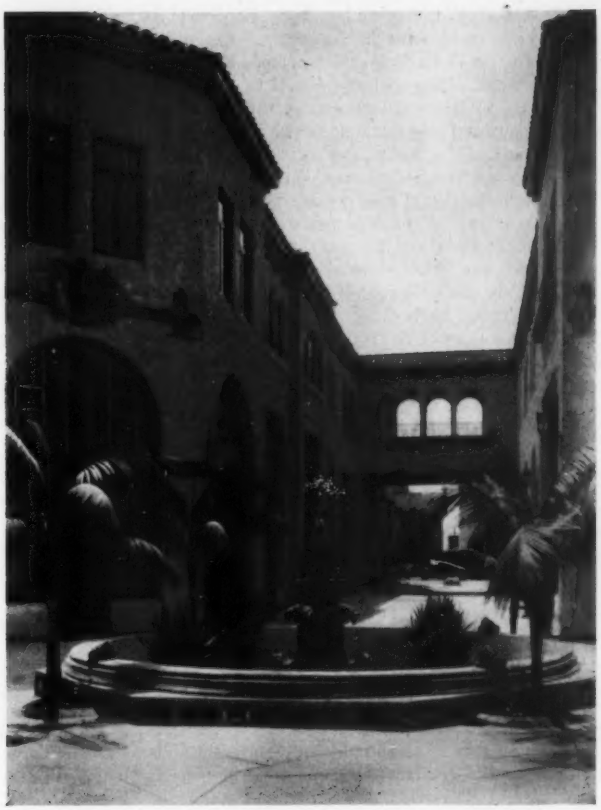


SHOPS IN EL PASEO CHARLES A. HARRIS

the inner court were supplementary to the rooms of the house, all of which had entrance upon the veranda. The greater part of the family-life took place on these verandas. Babies slept, were washed, sat in the dirt, and played upon them. The women said their prayers, took their naps, and wove their lace there." This century-old home has been restored and is now a part of a group of buildings forming what is called El Paseo (in English a walk). Two views show the narrow, old-world passage through which access is had to a court in the rear devoted to studios, craft shops and a most alluring café. Here the atmosphere is exotic, especially when some social affair or fiesta calls for Spanish costumes and music. The other illustrations are typical of the new construction on the main thoroughfare.

Except as working-methods may avail there is probably little to be said about architectural photography. Following the usual course the novice will probably draw a little from here and there and eventually work out a plan for himself. However, we might open the subject with a comment on a recent suggestion that a hand-camera without the aid of tripod, a small reflecting-finder and a focusing-scale is a satisfactory means to photograph buildings. Of course, to meet an emergency and be able to handle it is one thing but to adopt such a method for strictly architectural photography is perhaps the least advisable one to follow. The distortions that may occur in the reproduction of architectural subjects and which are not always easy to avoid, even with complete equipment, are of two kinds. One consists of converging lines and the other, the side twist when the subject has been photographed out of perpendicular. When, as not infrequently the case, both occur in the same print, the result is something of a curiosity. To be sure, it is possible, if the amateur has



THREE-SECTION STRUCTURE WITH SHOPS CHARLES A. HARRIS

properly equipped projection-apparatus, to correct these errors in the print produced; but why add to the burden with snapshooting-methods when the trick could be turned if the outfit was supplied with at least a ground-glass focusing-screen and fastened to the top of a tripod. As regards a standard view-camera it should be remembered that the adjustments are subject to the limitations of the lens. It is very convenient to use, but otherwise, unless equipped with the right lenses, the old hand-camera might accomplish the same results. The rising-and-falling front of extreme range is much to be desired in this class of work, but more than a moderate range cannot be successfully employed with an average anastigmat. Beyond the next larger size for which a good lens is designed the definition falls off resulting in thin; and, in some cases, perfectly blank corners. Even within the limits indicated it is usually best to stop down the lens proportionately as it is racked from a central position the conditions and rules being the same as for wide-angle work. Some few lenses like the Turner-Reich are designed by the makers to cover such emergencies, these being corrected for practically the full light-circle. Such qualities also make them first-class wide-angle lenses when used upon a larger plate than normal; and so, if found convenient to use two sizes of plates, one lens could be made to answer all requirements for this work. I followed such a plan some time ago by making use of two cameras, though not both at the same time. It could also be managed with one camera furnished with both regular and reducing backs. The other principal adjustment, the swing-back, is similarly restrictive. Here the factor involved is depth of focus. Because of the necessity to use

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very small stops involving lengthy exposures and also much more care in focusing, I generally prefer to use the adjustable lens-board for this sort of work. The swing-back is rather more adaptable to landscape to adjust the focus for near foreground and distance where the problem is different. The horizontal swing one seldom finds any use for. Shall one equip for films or plates? Opinions and preferences, largely due to the nature of the work done, will in the end decide since there are advantages or qualities in each that the other does not possess; but, if planning to do all-around work, the greatest flexibility may be had by including both plate and film-holders. A set of Eastman film-sheaths for the plate-holders makes them all available for film when desired. These film-sheaths, of rigid metal, are placed in the holder same as a plate. They are designed to hold the film in the same register as a plate so that holders of both types may be used interchangeably without affecting the focus. In fact, the manipulation is so simple, when accustomed to their use, that film-holders might not be missed except for their advantage in lightness and compactness.

Suppose we now begin operations by first going over the ground and forming plans for the campaign. Note how the structures are lighted at different hours of the day and select for each what is thought to be the best time. Always work with sunshine and a glancing, side light if possible as this produces pleasing contrasts and shadows. By this means details of construction are brought into relief and a brilliant print results. The more important side, usually the front, should receive the principal light; and, if another side is shown, this should be in shadow producing an effect of contrast and solidity. A front view is seldom as attractive as one showing a little in perspective. Arched façades will appear monotonous, if all are the same size and regularity. The automobile structure seems to show unusual perspective and a position a little more to the front might be indicated, but in reality these arches gradually diminished in size owing to the grade of the street. These arches and columns are, by the way, an exact copy of the Mission cloister. If there is height as well as breadth some ingenuity in the selection of a view-point will not be amiss. A building of considerable height even if possible to photograph from the ground is best handled from a raised position, say approximately a third of the full height. In this manner the camera and lens will work without strain and it also modifies the violent perspective of the roof-lines. When photographing white buildings, exposure and development should be so regulated as to secure fairly transparent negatives, otherwise, if blocked, there will be nothing but white paper in the highlights which is very objectionable. The whites of the print should be a shade darker in contrast when a sheet of white paper is laid upon it. I used, for the most part, Eastman cut-film, Commercial Ortho which proved very satisfactory where conditions warranted, producing good printing-negatives; but require at least double time-exposure over regular film. It seemed to be necessary to develop these films to a greater apparent density than for ordinary film although this may be characteristic with slow emulsion with which I have had limited experience. However, for work of this kind one can safely give preference to the commercial film over the ordinary with the added advantage of orthochromatic effects. I carried a few Double Coated Ortho plates, also excellent for the same results, to be used when it was necessary to speed up for street-movement. There is but little choice between these two except in the matter of price and the difference in speed. The use of medium stops for definition and slow emulsion will not permit of movement during the exposure; but, on the other hand, figures and groups, if not too conspicuous, lend animation to the picture. It takes 1/50 of a second to stop walking figures on the opposite side of the street. The exposure question bearing upon this work, always one of interest, is described in February PHOTO-ERA MAGAZINE, page 73. Perhaps the intuitive perception mentioned is similar to the sense of time with which a musical director is endowed. But to lessen the strain it may be as well to practise counting these intervals of time accurately in order to be sure of uniform results on different occasions and to profit by previous mistakes. And we should rally to the defence of the scientific systems for determining exposure with the reservation that when all is said there is after all a human equation calling for the exercise of judgment and experience in making proper use of them. The indicated exposure may possibly be more nearly correct than is the shutter by means of which we interpret it. It is probably true, as one authority states, that no two shutters work exactly alike and the fractions of time, merely more or less as indicated upon the scale, the advice being simply to become accustomed to the way your shutter operates, and be satisfied. Shutters are more accurate and reliable than they used to be especially when compared with the old air-pump retarding-device; but, used with exposure-meters, the trouble is we expect a hair-splitting accuracy which even a high-grade time-piece is incapable of. However, it is probable that the average photographer of

experience depends but little upon his light-meter, and then simply as a check in some doubtful case. If exact results are essential for important or critical work a preliminary test for exposure and development constitutes a better guide than computations upon a light-meter. These prints being very similar, same exposure data will apply to all. White buildings with red-tile roofs, using the commercial film an exposure of 1/10 of a second at F/11 is about right in sunlight from 9 to 10 A.M. or 2 to 3 P.M., the noon hours being avoided. Cast shadows will not usually be very deep as white walls reflect light strongly. Under some conditions, medium dark buildings and average work of this class would require 1/5 of a second.

To those who like the effect of sharp, clean-cut detail and beautiful fascinating subjects to work upon, architectural photography should take a leading part in the amateurs' program; and let us hope, become an inspiration to carry on to a greater and truer understanding of photography.

Motion in Motion-Pictures

M. A. KOLB

ALTHOUGH modern motion-pictures are generally considered to be practically perfect reproductions of the scenes photographed, they are not really entirely free of defects. Of the various types of imperfections found in pictures, probably the most noticeable ones are three that occur at times in movements on the screen. These defects are: 1, blurring; 2, jerkiness, or lack of continuity; and, 3, the false reproduction of the speed or the direction of motion of objects.

In order to over-come these flaws in the portrayal of motion, certain requirements must be met that should be of interest to the amateur kinematographer. It is our purpose here to explain them.

It is probably best, first of all, to give several illustrations of each of the three kinds of imperfections.

The Three Imperfections

Blurring is a defect that almost invariably accompanies rapid movements in pictures. Even when a person walks across the screen at only a normal speed, the figure becomes somewhat indistinct; and in the case of a small, swiftly-moving object, the image is rendered almost invisible.

In connection with these blurred portrayals, it might be contended that details of swiftly-moving objects cannot be distinguished, anyway, so one cannot expect to see them on the screen. Although this is true to some extent, the fact remains that the indistinctness of rapidly-moving objects in pictures is considerably greater than that that is experienced in first-hand views of such objects. For this reason, blurring ought to be considered as an imperfection in screen portrayals.

Jerkiness, like blurring, is also associated with swift movements, although it is not quite so readily noticeable. An example of this flaw can usually be observed when a person raises himself from a stooping position to an erect posture; the move is generally difficult to follow because it seems to proceed by one or two sharp jerks. A more pronounced illustration of this lack of continuity can frequently be seen in the leg-movements of a person running across the screen. But jerkiness is probably the most conspicuous in scenes photographed by cameras in rapid motion—in scenes made from speeding trains, for instance. In such pictures, all the trees and houses, or whatever the objects in the scene are, seem to pass the observer with such a jerky motion that a rather kaleidescopic effect is produced.

Although false velocities—the term velocity may include the idea of direction of motion as well as speed, and it is in this sense that we use it here—do not occur frequently, illustrative cases are not lacking. When a picket-fence, for instance, is shown in a scene that was photographed by a moving camera, the pickets commonly appear to move along with the camera. As another illustration, we have the caterpillar tractor that moves forward, while the belts on which it travels, or rather the cross-bars forming the treads of these belts, appear either to move forward too slowly, or to stand still, or to run backwards. But the most frequent example of this type of imperfection can be seen in views of moving vehicles having spoke-wheels; like the belts on tractors, these spokes often appear to move forward too slowly, or to turn backwards, or to have no angular motion in either direction.

A fair idea of our three types of imperfections should be had from the foregoing illustrations. The general cause of each of these defects can now be explained.

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The Cause of Each Defect

In describing the causes of these imperfections, it is first necessary to mention that, in modern kinematography, the standard rate of making and projecting pictures is sixteen per second, and the time of exposure used is from one twenty-fifth to one fiftieth of a second.

Blurring arises from the fact that a moving object is represented on each photograph by a blurred image, the length of which is equal to the length of the object plus the amount of space passed through by the object during the time of exposure. The form of the image of a moving disc-shaped object, for example, would resemble that of the shaded area shown in figure 1; the length of this image is equal to the diameter of the object plus the amount of space, indicated by the distance A, that is passed through by the object during the time of exposure. Just how badly blurred the image of a moving object will be depends more or less directly upon how great this distance A is. If an object moves slowly, the distance it passes through in a time of exposure of, say, one thirty-second of a second is not appreciable, and, therefore, the blur in the portrayal of this object will hardly be noticeable. But it often happens that an object moves from several inches to several feet in this time, in which case the blurring will be quite conspicuous.

Jerkiness is attributable to the fact that a moving object is represented on each photograph by an image that is displaced from the position it held on the preceding picture by a distance equal to the space the object passed through during the interval of time between photographs —one sixteenth of a second. For instance, if consecutive photographs showing a disc-shaped object moving toward the left could be projected onto the screen simultaneously, the images of this object would appear somewhat like figure 2. In this figure, A represents the image on one photograph; B, the image on the next picture; and so on. The distance S indicates the displacement of the object during the interval of time between photographs. Whether a series of such displacements will have the appearance of a smooth, uninterrupted movement or that of a jerky motion depends mainly upon their magnitude. In the case of slowly moving objects, the displacements in the standard one-sixteenth-second interval of time between pictures are small enough to produce the illusion of continuous motion on the screen; but when objects move swiftly, the displacements in this time are so great that jerkiness is often noticeable.

The general cause of false velocities should be evident from an explanation of how they occur in the case of revolving spoke-wheels. Say, for example, that A and B are two adjacent spokes in a wheel, and that a and b are their respective images on one photograph and a′ and b′ are their images on the next picture. Now it is obvious that a′ and b′ will be displaced from the relative positions of a and b by an angle equal to the one the wheel rotated through during the interval of time between photographs. It is also evident that, in some cases, this displacement might be just enough so that the image b′ on the one picture over-laps the relative position of the image a on the preceding picture. For instance, if the spokes are, say, thirty degrees apart and if the wheel turns toward the left at a speed of about thirty-two degrees in the one-sixteenth-second interval between photographs, then b′ will over-lap a somewhat as shown in figure 3. Now a and a′ are the two successive images of spoke A; so in order to have a true reproduction of the motion of this spoke, the apparent movement on the screen should plainly be from the position of the former image to that of the latter. But on account of the wide blank space separating these two images, no such appearance is produced. On the contrary, the apparent movement is from a to b′. One reason for this is that b′ resembles a in appearance just as closely as a′ resembles a; hence, insofar as the similarity between images is concerned, the apparent movement can just as well be from a to b′ as it can be from a to a′. Another reason why the motion seems to be from a to b′ is that the latter image over-laps the relative position of the former. This over-lapping establishes a sort of physical continuity between b′ and a that does not exist between a′ and a. So here we have a case where the actual movement of a spoke is thirty-two degrees toward the left—from a to a′—but where the apparent motion on the screen is only two degrees toward the left— from a to b′. In other words, the portrayed motion is in the same direction as, but is much slower than, the real movement that was photographed.

It is not absolutely essential that b′ should over-lap a to cause this false reproduction; if b′ is separated from a, but is closer to it than a′ is, the apparent motion would still tend to be from a to b′ rather than from a to a′. However, a really distinct movement will not be portrayed unless b′ over-laps a.

If the actual speed of rotation of the wheel had been just thirty degrees per one-sixteenth of a second instead of thirty-two degrees, image b′ would have coincided perfectly with a, and there would have been no movement shown on the screen at all. And again, if the actual speed had been twenty-eight degrees instead of thirty-two, image b′ would have over-lapped a on the

right-hand side of that image instead of on the left side, and the motion shown on the screen would have been two degrees toward the right in placeof the actual twenty-eight degrees toward the left. In other words, the portrayed movement would have been in the opposite direction from, as well as much slower than, the actual motion that was photographed.

From the foregoing illustrations of the causes of false velocities, certain additional facts should be evident. One is that, since the spokes in a wheel are all similar to each other in appearance and are equally spaced and as they all revolve at the same speed, it is natural that, where the motion of one spoke is incorrectly portrayed, the movement of all the other spokes will be falsely shown in the same way. Another fact is that it does not have to be the images of two adjacent spokes that must over-lap or coincide in order to cause a false reproduction. The over-lapping or coinciding might take place between images of spokes that are two or more spokes away from each other, with the same result. The higher rotative speed, however, will cause more blurring. Another thing is that the motion of any series of objects that are similar to each other in appearance and that are equally spaced will sometimes be falsely reproduced for the same reason that the movement of spokes is incorrectly shown.

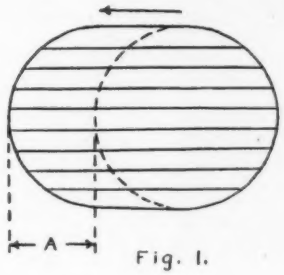


Fig. 1.

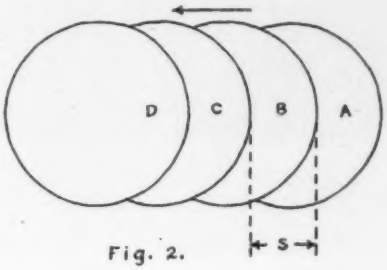


Fig. 2.

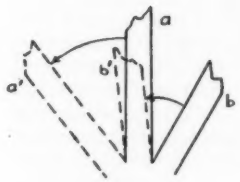


Fig. 3.

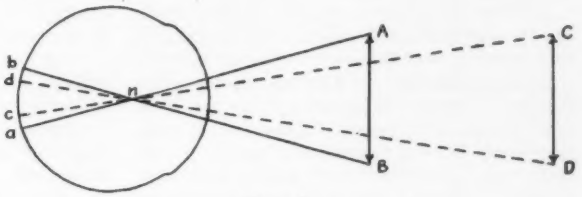


Fig. 4.

FIGURES 1—4 M. A. KOLB

From the above outline of the causes of blurring, jerkiness, and false velocities, we can go on to the requirements that must be met in order to overcome each of these defects.

The Requirements for Overcoming each Imperfection

As has already been mentioned, the image of a moving object is longer than the actual object by a distance equal to the amount of space the object passed through during the time of exposure. It is plainly by reducing this distance that we can diminish blurring in motion-pictures. For instance, in figure 1, where the image of a moving disc-shaped object is shown, it is the distance A that must be shortened.

In order completely to overcome blurring, this distance must be made short enough so that it cannot be distinguished by the eye. The problem of determining how short it must be is obviously that of finding how close together two points must be to give them the appearance of a single point. This distance depends upon certain discriminating powers of the eye that will be explained shortly.

As jerkiness is caused by the excessive distance that sometimes separates the successive images of a moving object, the way to mitigate this imperfection is to shorten this distance. For ex-

NEW YORK AT NIGHT RUDOLF HAASE
HONORABLE MENTION—BEGINNERS' COMPETITION

ample, in figure 2, where the consecutive images of a moving disc-shaped object are shown, it is the distance S, that must be diminished.

To eliminate jerkiness entirely, this distance S, like the distance A just referred to in connection with blurring, must be shortened enough to make it imperceptible; and the problem of finding this distance is again that of determining how close together two points must be to make them indistinguishable. One assumption is made in this requirement, however, which is that the images are clear and not blurred; if they are blurred, the distance S can obviously be greater than the above-mentioned distance.

In order to know just how little or great is the power of the eye in discriminating between two points in the field of vision, a few physiological facts about this organ are necessary. Briefly speaking, the eye consists of a retina and a lens. When light from an object penetrates the eye, a miniature image of the object is formed on the retina. The retina is a thin membrane lining the entire back of the cavity of the eyeball. This membrane is made up of a large number of minute end organs that are connected to brain centers through the optic nerve. Light stimulates these end organs and causes them to discharge nervous impulses to the brain.

One of the powers we have is that of being able to distinguish the stimulation of one part of the retina from that of another. According to physiologists, we can distinguish two points whose retinal images are not more than 0.00016 inch apart. The distance between the retinal images of two points is determined by the visual angle under which they are seen. This angle is that included between the lines drawn from them to the nodal point of the eye—the common point through which all oblique rays of light pass in entering the eye. If A and B—figure 4—are luminous points, the image of A will be formed at a on the prolongation of the line An joining A with the node n. In a similar manner, the image of B will be formed at b. But if A and B, still remaining the same distance apart, be moved farther away from the eye to C and D, the visual angle under which they are seen will be smaller and their retinal images will be closer together at c and d. The distance between the retinal images of two points will then depend, clearly, not only on the distance between the points themselves, but on the distance they are from the eye. To know the discriminating power of the retina, we must therefore measure the visual angle in each case. In the fovea centralis, which is the most sensitive part of the retina, two objects seen under a visual angle of about one minute can be distinguished from one another; this gives for the distance between retinal images that mentioned above, and corresponds pretty accurately to the diameter of an end organ in that part of the retina. We may conclude, therefore, that when two images fall on the same end organ or two contiguous end organs, they are not discriminated; but if one or more unstimulated end organs intervene between the stimulated, the points may be perceived as distinct. The diameter of an end organ, in fact, marks the anatomical limit up to which we can by practice raise our acuteness of visual discrimination; and in the fovea, which we constantly use all our lives in looking at things we want to see dis-

THE STREET-SHOWER — DUANE P. HOTCHKISS

HONORABLE MENTION—PICTURES OF CHILDREN

tinctly, we have educated the visual apparatus up to about its highest power. Elsewhere on the retina our discriminating power is much less.

From these physiological facts, the minimum distance that must separate two points to make them distinguishable can be readily worked out for any given distance between the observer and the points. For instance, figured from the previously-mentioned visual angle of one minute, this distance between the points is about 0.17 inch for an observer who is fifty feet away from them, or 0.34 inch for a person who is one hundred feet away.

To prevent the velocity of a series of similar objects from being falsely portrayed, it is necessary that the successive images of each particular object shall not be farther apart from each other than one-half the distance between the objects. Under such conditions, the consecutive images of each object will always come closer to over-lapping each other than they will to over-lapping any of the images of the other objects; therefore, the apparent movement on the screen will always tend to be from the image of each object on one photograph to the image of the same object on the next picture, and this apparent motion will be a true reproduction.

The actual problem of meeting these requirements for overcoming blurring, jerkiness, and false velocities is purely a mechanical one. To meet the requirement for overcoming blurring, it is necessary to reduce the time of exposure. The requirements for preventing jerkiness and false velocities both would have to be met by increasing the number of photographs made and projected per second.

From a little study of the facts involved, it should be plain that if the requirement for overcoming jerkiness is met, the requirements for preventing blurring and false velocities will also have been met.

At the present time, any attempt to decrease the time of exposure, or to increase the number of pictures made and projected per second, would seem to be impracticable. The time of exposure could be reduced easily enough; but where this change would diminish blurring, it would at the same time increase jerkiness. In any attempt at increasing the number of photographs made and projected per second, many mechanical difficulties would be encountered. It is true that as many as one hundred and twenty pictures per second have been made with special cameras for slow motion pictures; but the scenes thus photographed are short, and the projection speed is only the regular sixteen photographs per second.

However, if the three types of imperfections found, today, in kinematographic movements ever are overcome, it will be done only by applying the principles that have been outlined here.

XUM

Addenda to "The Frolic of the Light"

(With Suggestions to Brownieites)

MILTON M. BITTER

IN my article, "The Frolic of the Light," in PHOTO-ERA MAGAZINE last month I gave a Pyro-Acetone formula (1/6.6) for the tank-development of Kodak Speed Film (rolls), but neglected to give the times of development at varying temperatures. Those familiar with the Watkins Thermo-system will understand, of course, that the time of development should be according to *the tank-scale* of the Watkins Pyro-Soda Time Thermometer. But for those that wish to try the Pyro-Acetone developer in their tanks or developing-boxes, and haven't a Watkins Time Thermometer, I wish to state that the tank-times are, partially, as follows:

60°F	24	minutes
62	22½	"
64	21	"
65	20	"
66	19½	"
68	18¼	"
70	17	"
72	16	"
74	15	"
76	14	"
78	13	"
80	12	"

Do not forget that it will take about a minute to remove your film from the apron, and that development is going on all the time while you are doing it. Still, this developer is so perfectly balanced that over-development a minute or so will make no perceptible difference.

After removing the film from the apron and attaching clips on the ends, with which to handle it, draw it through a tray of water once or twice before rinsing in the potassium chrome-alum rinse (hardening) bath. I note that the Eastman Kodak Company is now recommending a plain potassium chrome-alum bath *without acetic acid*. This bath is made by adding ½ ounce of potassium chrome-alum to 16 ounces of water, and is doubtless better for warm weather. Don't overwork it.

After developing your films DO NOT HANDLE THEM WITHOUT CLIPS. The heat of your fingers is likely to melt the emulsion, causing it to run down on the negatives and streak them, and you will wonder what did it.

The foregoing time-scale for roll-films should also be used in tank-developing Kodak Film-Pack, but the Pack should be given a Watkins VS rating. From published data I infer that Agfa Film-Packs should be given about 15% less development than the Kodak pack. However, I am not sure of that.

To mix the developer for the Kodak Pack, rating it at Watkins VS, use the formula:

Water	9	ounces
Pyro Stock-Solution (See Sept. Photo-Era)	6¾	drams
Acetone	90	minims

Mix in the foregoing order, adding the acetone slowly while stirring. Before mixing your developer always let the water stand for some time until it reaches the temperature of the room in which you are developing, unless you are using other means of maintaining an even temperature, such as setting your developing-cup or tank in a large pail of cooled water.

This formula makes practically 10 ounces of developer, with a pyro strength of 1.35 grams to the ounce, with 6.6 minims of acetone to each grain of pyro. The quantities necessary for *your* particular tank or developing-cup can be figured by dividing the fluid-ounce capacity of the tank by 10 and multiplying each item in the foregoing formula by the quotient. For instance, for a No. 2 Premo Film-Pack Tank, capacity 54 ounces, multiply by 5.4. The results are as follows (exactness is not essential):

Water	48½	ounces
Pyro Stock	4½	ounces
Acetone	1	ounce
Total	54	

The Kodak Speed Film (roll) developer should be mixed to make a one-grain strength, with 6.6 minims of acetone to the grain. For a No. 2 Kodak Developing Tank (for 2¼" x 3¼" films) take 6 drams Pyro Stock, 80 minims Acetone, water to make 12 ounces.

Use distilled or boiled water (cooled) for mixing your stock Pyro-Solution. It will keep better, and work better. Distilled water is cheap—I have been paying only 15 cents a gallon; ten cents extra for the bottle.

To the Brownie Clan—and Others

I have just had a very puzzling and illuminating experience, the telling of which may be helpful particularly to those who are getting their first photographic experience with small box-cameras of the Brownie type.

My son was in attendance at the Citizens Military Training Camp, Camp Meade, Delaware, this summer and took with him an old-type Brownie No. 2 and a supply of Kodak Roll-Films. He sent several rolls home to be developed.

The first roll, which I developed in a Kodak Developing-Tank with 1/6.6 Pyro-Acetone, came out very flat and dull—no snap or brilliancy at all. I was puzzled.

It was at the peak of the extremely hot weather and I felt that something had gone wrong with my chemicals. My acetone was low in the bottle (16-oz.); my sulphite had been on hand quite a while; but I knew that my pyro was fresh and O.K. I bought another bottle of acetone and fresh sulphite, mixed fresh developer, rinse-bath and fixing-bath and developed the second roll. Same results as before.

I was not only puzzled this time, but worried, for I had just written so highly of this developer, and I began to wonder if there had been any recent change in the emulsion of the Kodak Roll-Films. (I had not developed any of them for about six months.)

I developed a third roll, using 10 minims of acetone instead of 6.6. Denser and more contrast, but still something decidedly wrong.

Then my boy returned home with the camera.

All of the rolls had shown a fine, white streak, like a scratch, across a part of every negative, and the mark was in the same place on all! I felt sure that this was caused by a hair or fibre of some kind which lay across the focal plane. Sure enough!—when I examined the camera there it was—a fine hair.

Casually, almost indifferently, I looked at the lens. Jehosaphat! Camp Meade is a dusty place. I'll say it is; (We visited the boy one Sunday while he was there.) *and that lens proved it.* I took off as much of the front mechanism of the camera as I could, and with the aid of a match-stick, a soft, old, linen handkerchief and alcohol, I gave that lens a real bath with an alcohol rub-down, (I don't, ordinarily, use alcohol or any kind of a solution in cleaning a lens.) The lens was one of the old, almost-non-get-at-able type.

Then I decided to find out IMMEDIATELY whether this dirty, dusty lens was the cause of my troubles. I filled the camera with a Kodak Roll-Film, went out on the front porch and snapped the house across the way, then into my back yard and snapped the cat and dog and other members of the family. Developed the roll in a Kodak Tank with 1/6.6 Pyro-Acetone at 76°F; didn't even wait to cool my rinse-bath or fixing-bath; washed the film in tap water at 73°; and believe me, dearly beloved, *I got the most beautifully detailed, best-graded, and best-printing set of Brownie negatives that I ever made*—and not a sign of a frill, reticulation or softening of the emulsion.

I might add, incidentally, that by using vigorous gaslight paper (Defender Commercial, No. 102) I succeeded in getting fairly good prints from the other rolls.

Moral

1. Don't use *any* kind of a box-camera with a *non-get-at-able* lens.
2. Clean the lens, front and back, *every time* before inserting a roll-film if you have been hiking, automobiling, traveling, camping or otherwise vacationing in a *dusty or damp* place. A lens should always be cleaned before inserting a roll of film at seaside resorts or inland where there is much fog.
3. Examine the inside of your camera carefully to see if there are any hairs or fibres that have caught in the body of the camera when cleaning it.
4. If you use a box-camera of the Brownie type protect the lens with a cork inserted in the opening in front of the lens. If colored with black ink the cork will not be conspicuous.
5. If you have an old-type Brownie examine the velvet or satin strips across which your film is drawn at the back. If they are worn, put on new ones, but use *thick glue, and scantily,* else it will soak through, harden and scratch your film. Always clean these velvet-strips when cleaning the camera. A grain of sand lodged in them may do much damage.

If you have had any dull, flat negatives this summer you had better examine your lens. As the advertising-writers would say—"Do it Now."

XUM

AT SEA
F. W. G. MOEBUS

EDITORIAL

Bring Your Camera With You

THE custom still prevails that when a practical musician, amateur or professional receives an invitation to dine, he or she is expected to entertain the assembled guests later in the evening. In the case of a violinist, that person is requested to bring his instrument, unless the hostess lets it be known that she will provide a suitable one. Of course, should the violinist be a distinguished virtuoso, or even a prominent local artist, the matter of honorarium will be satisfactorily arranged. If the invited musician be a singer, there is no need to fear lest the voice be left at home; yet it has happened that the invited vocalist arrived with a sore throat or a cold, and unable to contribute her share to the musical program. Nevertheless, the professional artist who desires to be better known should not fail to appreciate the advertising-value that will be derived from an appearance before a select audience at the home of a social leader of artistic discrimination.

The tendency to utilise the executive ability of a successful musical performer now seems to have been extended to the proficient camerist. He, too, engages the attention of the far-sighted, resourceful hostess. Whether the occasion be a dinner, a fancy-costume party, private theatricals, or a *soirée musicale*, the ability of the camerist receives social recognition, and he is invited with the suggestion that he bring his camera with him and be prepared to make some pictures. Sometimes it is intimated that the expense of the required prints will be borne by the hostess. This very proper suggestion may but serve to increase the embarrassment of the camerist who, having enjoyed a delicious dinner, the opportunity to meet some delightful people and to have a pleasant social time, shrinks from sending a bill after having provided the required number of prints. To do so, might also affect his standing as an amateur in the strictest sense. Or, desiring to preserve the friendly relations existing between himself and his host, he may decide not to treat the matter as a commercial transaction, but to offer the prints with his compliments and quietly pocket the expense, which, by the way, will be the greater, if the exposures are photo-finished by a professional. To be entirely fair and ethical in the matter is the desire of the conscientious camerist; whereas the worker who persists in making his camera pay its way, or better, will treat the situation in a cool, business-like manner.

Perhaps, after all, it would be well if the invited camerist were to explain the photographic situation to his hostess—who may not be aware that she is causing her guest an expense which may greatly exceed the (monetary) value of her hospitable invitation to dine—offering her his services as a photographer and presenting her, later, with the exposed films or plates with the suggestion that she place them in the hands of a reliable photo-finisher, and thereafter regard the negatives as her personal property to do with as she may please. In this way, the photographer will have given an equitable *quid pro quo*, preserved his dignity as an amateur-artist and, incidentally rendered a service to a professional photo-finisher.

An Autochrome Lamp-Shade

TWENTY years ago the Autochrome-plate was born. For twenty years the Lumière natural-color process, direct and simple, has given pleasure to numberless amateurs throughout the photographic world. Although, at first, many workers preferred plates in the larger sizes—5 x 7 and even 6½ x 8½—others chose those of small dimensions—4 x 5 and 3¼ x 4, the latter because of the ease with which they could be projected in the optical lantern. Workers—and there are many—who have produced Autochromes in 5 x 7 size, and who find it inconvenient to project them, may be glad to know that instead of lying perpetually idle, these superb and truthful reproductions of flowers, fruits, pageants, autumn-scenes and art-objects may be enjoyed in a novel and permanent way—not as transparencies hung in the window, but in the form of lamp-shades. This somewhat novel idea occurred to us recently as our collection of Autochromes, made about fifteen years ago, was unexpectedly brought to light. The mere mention of lamp-shade in connection with Autochromes will suffice to suggest to the resourceful worker how he may construct such a device. Nevertheless, elsewhere in this issue will be found directions for making an effective Autochrome lamp-shade. We trust our readers may utilise the information offered.

XUM

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $3.00.

Honorable Mention: (*a*) Those who win an Honorable Mention Award and are *not regular subscribers* will receive PHOTO-ERA MAGAZINE for six months with the compliments of the Publisher.

(*b*) Those who win an Honorable Mention Award and are *already subscribers, or have been subscribers,* will receive an Honorable Mention Certificate. Those who win ten of these certificates and send them to us to be recorded will receive a neat silver cup, suitably engraved. There is no time-limit. However, ten certificates must accompany all requests for the cup.

Prizes may be chosen by the winners, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a solid silver cup, suitably engraved.

No Prize or Honorable Mention pictures are sold, exchanged or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, *excepting halftones,* go to the maker of the picture.

All competition-pictures not returned are used to make up the PHOTO-ERA PICTURE EXHIBIT which is sent to schools, libraries, museums, camera clubs and to responsible organisations for exhibition-purposes, *free of cost.*

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.
2. Not more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered into competitions elsewhere, before PHOTO-ERA MAGAZINE awards are announced.
3. Prints on rough or linen-finish surface, and sepias, are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. Prints may be mounted or unmounted.
4. Each print must bear the maker's name and address, the title of the picture, and the name and month of competition, and should be accompanied by a letter, *sent separately,* giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer, and printing-process. Enclose return-postage. Data-blanks sent at request.
5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives *after* he shall have received official recognition.
6. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces is sent with data. Criticism at request.
7. Prints should be carefully packed between two layers of cellular board so cut that the corrugations run at right-angles to each other.
8. Competitors who have won three first prizes within a twelvemonth become ineligible to compete for prizes in this competition for *one* year thereafter.

Awards—Advanced Competition
Subject—Pictures of Children
Closed July 31, 1926

First Prize: W. H. Rice
Second Prize: Wm. O. Yates
Third Prize: U. M. Schmidt

Honorable Mention: Daisie B. Chapell; Chas. Clayton, Jr.; Geo. M. Gerhard; Duane P. Hotchkiss; S. Izuo; B. W. Jenkins; Olfredo Melina; Bruce Metcalfe; B. A. Norman; Nicholas A. Romano; Valentino Sarra; Henry Sill; Burton Slade, Jr.; Maurice Smith; Dr. Max Thorek.

Subjects for Competition—1926

"My Home." Closes January 31.
"Miscellaneous." Closes February 28.
"Indoor-Genres." Closes March 31.
"Table-Top Photography." Closes April 30.
"Artificial Light Photographs." Closes May 31.
"Miscellaneous." Closes June 30.
"Pictures of Children." Closes July 31.
"Real Sunrise and Sunset Pictures." August 31.
"Wild Flowers." Closes September 30.
"Miscellaneous." Closes October 31.
"Lakes, Rivers and Brooks." Closes November 30.
"Interesting People and Places." Closes Dec. 31.

Photo-Era Prize-Cup

"SITTING IN THE CORNER"
W. H. RICE
FIRST PRIZE—PICTURES OF CHILDREN

THE CHARLESTON—ON THE SANDS WM. O. YATES
SECOND PRIZE—PICTURES OF CHILDREN

Advanced Competition

AMONG the numerous entries in the popular competition "Pictures of Children", one picture stood out prominently, viz., "Sitting in the Corner", page 203. Not only does it captivate by reason of the spontaneity and sweetness of expression—so characteristic of babyhood—but by the beauty of portrayal and simplicity of composition. Nothing is forced or artificial. The pose is natural and artistic. It could not be improved. The lighting is superb, and the values throughout are truthful and merit attention and praise. Rarely has PHOTO-ERA published a more pleasing and artistically rendered child-portrait—although it could be classed as a genre.

Data: Made in a professional studio, by a professional (Bill Rice); May 26, 1926; 11 A.M.; daylight and artificial illumination; 1 second; 8 x 10 Eastman Studio Camera with 5 x 7 back; 12-inch Ic Tessar; stop, F/4.5; 5 x 7 Eastman Par Speed Film; pyro; enlarged on Portrait Bromide Old Master.

The excellences that won official recognition for "The Charleston—On the Sands" must be obvious. The pictorial design follows well-known rules of artistic composition. The setting is effective and pleasing. The little girl is probably practising the popular dance, and being apparently isolated (on the shores of Lake Erie)—except for the presence of the photographer—she is safe from remarks of critical onlookers; for her motions do not seem to accord with those of the performance by adept dancers. Although the setting sun is behind her, and the hour is nearly eight o'clock, midsummer, the illumination of the frolicsome subject is excellent. The composition is well balanced, the perspective admirable and the technique faultless. (This criticism is made against the expressed wish of the maker of the photograph.)

Data: Made at Erie, Pa., July, 7.45 P.M.; veiled sun; half-plate, home-made reflex camera; 8½ x 9½-inch Graf Variable Lens; stop, F/3.8; W. & W. Panchromatic plate; Elon; enlarged on Eastman Portrait Bromide E Buff.

"Dorothy" will go far afield in search of an artist who can equal her present portrait. As regards truthfulness of expression, there can be no question, otherwise it would not have the approval of the artist who entered the print. As for the technique, this factor won the unstinted admiration of the official jury—three discriminating, appreciative and unbiased workers of long and wide experience. The reproduction reveals the excellences of the original print—lighting and values. I wish to call special attention to the beauty

DOROTHY U. M. SCHMIDT

THIRD PRIZE—PICTURES OF CHILDREN

of the flesh-tints—in face and limbs, which may be studied with profit by beginners in photographic portraiture.

Data: Made by a worker of seemingly professional experience, in Saginaw, Mich.; May; electric light; 8 x 10 Studio Camera; 10-inch Willard lens (probably of the Petzval portrait-type, made about sixty years ago); about ½ second; Eastman Par Speed Film, 5 x 7; metol-hydro; enlarged on Eastman Vitava Etching Brown.

WILFRED A. FRENCH.

Edmands Col

A SUBSCRIBER who flatters himself in the belief that he knows, by name at least, every mountain-peak in the state of New Hampshire informs us that he was "stumped", when he noticed the mention of "Edmands Col" in a recent issue of PHOTO-ERA, as he had not heard of this locality before. A thorough search of a detailed map of the White Mountains failed to yield the coveted information, He asks where this mountain-feature is situated.

A letter written to a well-known White Mountain authority, Edmund K. Alden, has brought us the following reply.

According to Mr. Alden, Edmands Col is a gap on the "Gulfside Trail", between Mt. Adams and Mt. Jefferson, *circa* five thousand feet above sea-level. It is situated at the junction of two frequented routes, the trail mentioned above and "Randolph Path" which ascends from the Ravine House in Randolph. It is named for the late J. R. Edmands who gave freely of his money, energy, and intelligence to the building of trails.

Relieving an Awkward Situation

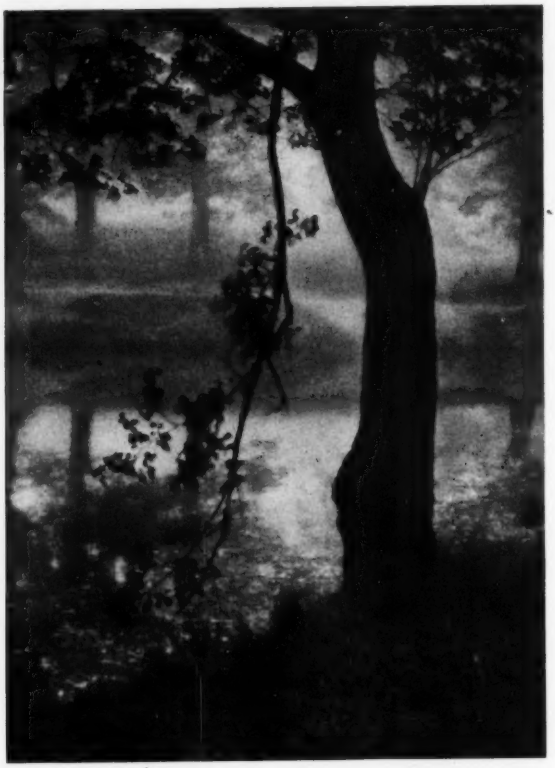
WHEN you are a guest at a garden-party, or at some other social occasion, at the summer-home of an acquaintance—be it at the sea-shore or in the country—you may be asked to make a picture of the place, but find the light-and-weather conditions unsuitable for a successful photograph. If so, do not decline, but do the best you can in the circumstances. If you are solicitous of your photographic reputation, or desirous that your host should possess the best photograph it is in your power to make, you might state that you would be delighted to come again when light and weather are favorable to enable you to do full justice to the subject. Having done so, you will please your host and protect your reputation as a discriminating and successful pictorialist.

W. A. F.

XUM

SUBJECT FOR NEXT COMPETITION

ADVANCED WORKERS



"ERE THE MIST HAD ALTOGETHER YIELDED TO THE SUN" — J. HERBERT SAUNDERS

Lakes, Rivers and Brooks—Advanced Competition
Closes November 30, 1926

ONE of the popular subjects which our readers seem to like in the Advanced Competitions is the one devoted to the consideration of lakes, rivers and even tiny little brooks. It is evident that there are great pictorial possibilities in the subject. There are few communities which cannot boast of some small body of water which may be included in the general subject of this competition. It may be interesting to state that last year we received an unusually attractive bit of river-scene and complimented the maker on his pictorial abilities. He deserved all we said of him as a pictorialist; for later we learned that this river-scene which we praised so highly was made near a city-dump on the banks of the river. The trees which arched so gracefully over the water in the picture were the only trees for several miles. The skill with which the maker of this picture met the great handicaps before him and with very meager material evolved a truly beautiful picture, stamped him the pictorialist that he was.

The reason for this little story is to impress our readers with the fact that truly beautiful pictures may be found near at hand. The skilled and trained pictorialist sees beauty in what to others may appear to be barren pictorial ground. Whether his camera is an imported reflex or a little box-camera has nothing whatever to do with the pictorialist's perception of beauty. If the worker cannot select beauty and symmetry for himself, his camera—no matter what the make or what the price—cannot do it for him. Therefore, any glimpse or expanse of water which has pictorial beauty is eligible in this competition.

A. H. BEARDSLEY.

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value $5.00.
Second Prize: Value $2.00.

Honorable Mention: (*a*) Those who win an Honorable Mention Award and are *not regular subscribers* will receive PHOTO-ERA MAGAZINE for six months with the compliments of the Publisher.

(*b*) Those who win an Honorable Mention Award and are *already subscribers, or have been subscribers,* will receive an Honorable Mention Certificate. Those who win ten of these certificates and send them to us to be recorded, will receive a neat silver-cup, suitably engraved. There is no time-limit. However, ten certificates must accompany all requests for the cup.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

No Prize or Honorable Mention pictures are sold, exchanged or the half-tone plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, *excepting halftones,* go to the maker of the picture.

Rules

1. This competition is open only to beginners of limited experience with practical camera-activity, and whose work submitted here is without any practical help from friend or professional expert.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints and enlargements up to and including 8 x 10 inches.

4. Prints representing no more than *two* different subjects, for any one competition, and printed in any medium except blue-print, may be entered. Prints may be mounted or unmounted, as desired. Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competitions elsewhere, before PHOTO-ERA MAGAZINE awards are announced.

5. Prints on rough or linen-finish surface, and sepias, are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail.

6. Each print entered must bear the maker's name and address, the title of the picture, and the name and month of competition, and should be accompanied by a letter, *sent separately,* giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent at request. Criticism at request.

7. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives *after* he has received official recognition.

8. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with data.

9. Prints should be carefully packed between two layers of cellular board so cut that the corrugations run at right angles to each other.

Awards—Beginners' Competition
Subject—Miscellaneous
Closed July 31, 1926

First Prize: Mrs. Grace H. Baker.
Second Prize: Horace Tyzack.

Honorable Mention: John D. Blandford; Vincent Dolfi; Rudolf Haase; Hakon Haug; Godfrey Priester; Doris E. Wright.

"The Proof of the Pudding"

THE acid test of what the beginner, or the advanced pictorialist, has done this past summer is in the pictures which he shows to his friends, sends to competitions, hangs on the walls of his home and mounts in his photo-album. What he does or can do with his prints is the proof of the pictorial pudding which he has made. To be sure, some will say that the pudding is overdone, too flat or too rich; but if he has made a really good pictorial pudding for his friends and the public to enjoy, those who know a good pudding when they taste it will compliment him and encourage him to make many more of them.

Even though the pictorial pudding has not been made for public consumption, the beginner should take pride in presenting his work to the best advantage. Even an excellent collection of interesting pictures make a poor impression unless each print is neatly mounted in an album and appropriately titled. Yes, I admit that this means a rather tedious piece of work; but when it is done, how much better the pictures look and how much more interesting they are to the observer. The difficulty with most of us is that we wait until we have accumulated several hundred prints and, perhaps, forgotten where and how some of them were made. To be sure, we cannot always do as we would like to do; but a good plan is to title and mount all prints which are made during the month, whether there are two or seventy-five of them. Of course, it is assumed that we are referring only to the good pictures which are made and which will have a permanent value. If my readers are inclined to doubt the need of an attractive display of pictures, let them make note of their own reaction the next time some friend hands them a lapful of loose prints. To be sure, we try to be polite, to admire and to praise; but the experience is not so satisfactory as looking at a well-arranged and neatly titled album. Here, as in other cases, a little effort does wonders.

When it comes to mounting the prints in an album, let my readers remember that no longer is it a messy operation. There are a number of simple, clean and neat methods which are very far from messy. Some of the best are advertised in our pages. An evening's work will do wonders to collect, arrange and properly mount and title scattered prints. Emphasis should be placed upon the correct titling. Altogether, if a good negative is worth printing, a good print is worth permanent preservation. Have something to prove that you are a good photographer. Nothing is more conclusive evidence than a well-arranged and neatly titled collection of prints in an album.

A. H. BEARDSLEY.

OLD BRIDGE — MRS. GRACE H. BAKER

FIRST PRIZE—BEGINNERS' COMPETITION

Beginners' Competition

Mrs. Grace H. Baker deserves credit for a high degree of artistic discernment in choosing so attractive a subject as "Old Bridge". Appreciating the value of an interesting foreground, our camerist included some grasses that many a more experienced worker might have ignored. Yet, I am sorry to remark, had she raised the camera, thereby omitting these alluring accessories, although sacrificing about three-quarters of an inch of the lower part of the present reproduction, Mrs. Baker would have gained artistically by having the ridge placed lower in the view, with a corresponding increase of sky, with those fine trees having more room at the top. Even so, the brightly lighted section of the stream, at the right, would have the benefit of the top of a slender bush in the foreground. By making a contact-print on a sheet of paper larger than her original negative, but wider in proportion, and with more space at the top than at present, our promising artist may experiment with the result as suggested and see, for herself, an improvement in the composition.

Data: Picture made at Tilford, Sussex, England; September 30; 11. A.M.; bright light; Eastman Autograph camera (3¼ x 5½); Anastigmat, F/6.3; focal distance, 100 feet; Velox print.

Horace Tyzack chose an eminently interesting subject in "Smoke, Water and Steam". The title, too, merits praise. It is tersely descriptive. The group of piles with its reflection, in the foreground, is the most prominent object in the picture, placed to the detriment of the rather pleasing effect produced by the main source of interest—the manufacturing-plant. Here, all is pictorially satisfying. Even the reflected buildings, chimneys, smoke and steam appear to advantage—not sharply delineated. The water is low in tone, so that the contrast between it and the sky is about right. Only an experienced pictorialist could have thought to lower the line of buildings in the picture-area so as to obtain more space at the top and less below. At present, the picture is divided horizontally into two equal parts, which is not considered good form. To be sure, this group of piles, so conspicuously situated helps to obviate this fault in composition; but this dark-looking object is in itself a source of embarrassment to the observer, and what to do with it, is a question. A ready suggestion would be to obliterate it in the negative. This is comparatively easy, provided that the worker has the requisite skill. If accomplished successfully, this step should be followed by judicious trimming, pleasing though the foreground may be. The result will be found to be far more satisfying than the present one. However, before deciding to remove the objectionable piles, it might be well to try modification—making them less insistent—and note the results. The technical part of Mr. Tyzack's effort is very admirable.

Data: Made at Victoria, B. C.; October, 1925; 3.40 P.M.; misty sun; 3¼ x 4¼ Graflex; 5½-inch Kodak Tessar; stop, F/8; 1/20 second; Agfa Film Pack; Rodinal; print, Eastman Athena Old Master.

Wilfred A. French.

A Camerist's Resolution

Scarcely a club-meeting takes place but that some member, beholding a particularly fine piece of work—be it a bromoil, a gumprint, or lantern-slide in natural colors—will resolve to emulate the maker's success. At a meeting of the Union Camera Club last winter, when a number of superb quarter-size color-plates, Lumière and Agfa, were shown on the screen, a member—it may have been Thompson—said to me, "By George, those are great! The thing is so darned easy, I don't see why I haven't tried it". Slapping his thigh, he added, "Say! I'm going to get a box of that size tomorrow". After the meeting was over, and questions were put to Colonel Andrews, Jordan, and others, whose color-plates had been shown that evening, a visitor

"SMOKE, WATER AND STEAM" HORACE TYZACK
SECOND PRIZE—BEGINNERS' COMPETITION

living at Chestnut Hill was particularly enthusiastic. Addressing Jordan, he described certain gorgeous flower gardens at Hamilton, Magnolia and Beverly he had seen and greatly admired, and wished that he could have exposed some color-plates on them, as well as on the strikingly beautiful autumn-foliage of last year. "Now that you tell me that the process requires no skill, whatever, except to calculate the exposure with a meter, and have the plates developed by a professional expert, unless I prefer to do it myself, I am going to take it up. And to make doubly sure that I'll not forget it, I'll ask Pinkham & Smith tomorrow to send me several dozen plates next May, and in the fall I hope to be able to surprise you", were his closing remarks.

It is expected, therefore, that Secretary Sherman will be able to include some attractive features in color-photography in his announcements during the coming winter. And, by the way—it is not too late for intending workers in natural colors to begin with this year's autumn-foliage. It is expected to be early and brief, I am told. W. A. F.

His Daily Dozen

A SUMMER-VISITOR had just arrived at Waterville, New Hampshire. He was comfortably seated on the hotel-veranda busily observing the seemingly mysterious actions of an individual on the golf-course, not far away. First, the observer noticed, that he would hold the palms of his hands upright and against his temples for a while, peering intently at some object in the distance, then do the same thing with one palm facing down and against his nose, the other face down against his forehead—as if trying to simulate the shape of an oblong box. Following that, he would appear to lay something on the spot where he stood, look at the sky in several directions, walk away a few feet and energetically repeat the process in all its various mechanical details, except that in one spot he laid down his handkerchief, in another his cap, and in another his belt. "What can that man be doing"! said the observer, evidently dreading the next step. Then, unable to restrain himself longer, and turning to a neighbor who also seemed to be interested in the proceeding, he exclaimed, "What on earth is he about! Is he crazy?"

"Oh, that's all right", explained the other calmly; "that's Thompson, the amateur-photographer. He is only composing a picture!"

Free Cameras for School-Children

Official steps are being taken to supply Lancashire schools with cameras for the use and instruction of the children. At the opening of a Blackpool photographic exhibition a suggestion was made by the mayor that it would be useful for older pupils in schools to take up the study of photography, and, in consequence, an anonymous donor has given, free of charge, cameras to be used for the benefit of such pupils. The number of cameras placed at the disposal of the Blackpool Education Officer is sufficient to enable him to supply one to each secondary and central school in the Lancashire County area and to similar schools in some of the county boroughs.—*The British Journal.*

[We commend this excellent idea to the attention of Boards of Education and philanthropic individuals in the United States.—EDITOR.]

XUM

THE BEGINNERS' SANCTUM

A. H. BEARDSLEY

Photographic Adventures of a Beginner
No. 8

My experiences with enlarging, as recorded in Adventure No. 7, were such that I gave it up in disgust. To be sure, my outfit was only a daylight-enlarger; but it was made by a reliable manufacturer and I had seen some excellent work done with it. What, then, was the matter? My good friend and photographic mentor, who had been away during my struggles with the daylight-enlarger, returned at this point in the enlarging difficulties. I told him what I had done and to what place I had consigned anything and everything that had to do with enlarging. He listened patiently, smiled and invited me to spend an evening with him in his darkroom. At the first opportunity I accepted his invitation and brought along the daylight-enlarger.

Before he did anything, my friend explained to me the basic principles which govern all enlarging, whether done by daylight or artificial light. Then, he told me the difference between bromide paper and the usual developing-paper used for contact prints. Furthermore, he pointed out the several grades and surfaces of bromide paper and the negatives to which each was particularly suited. Finally, my friend went carefully and slowly into the problem of exposure in relation to daylight or artificial light. He then took my daylight-enlarger and told how each of the suggestions he had made would apply to my use of it. As a result I felt encouraged to try again. Thanks to my friend I had some idea of the correct exposure, the right grade of paper and the best developer to use. In fact, as I thought it all over, I became rather eager for daylight.

Before I left my friend that night he made a few enlargements with his outfit—just to give me some idea of how it was done and what a good enlargement looked like. His equipment was one of the best to be had at that time. He used an arc-light for illumination, large condensors to control the rays, a view-camera and a high-grade anastigmat lens. It was a pleasure to see him work and to see the results. Although there was not much in common between this large outfit and my little daylight-enlarger, yet, I think that this demonstration helped me more than anything else to understand what goes on when a negative is enlarged.

The next day, after getting the paper which my friend recommended, I brought my daylight-enlarger into action through a north window. With my watch I timed the exposure. I removed the paper in a small room, previously made light-tight, and slipped the sheet into the developer. I waited—and I waited some more. I was beginning to lose my enthusiasm when, suddenly, an image appeared and grew rapidly more distinct until it seemed to jump right out of the paper. With a veritable whoop of delight I pulled the sheet out of the developer, rinsed it in water and deposited it safely in the fixing-bath. Yes, there it lay—beautiful to behold, my first enlargement. Without a doubt, that was, and is, the finest enlargement ever made. Why? Because I made it myself, overcame my discouragement and regained confidence in myself and in photography.

A. H. Beardsley.

Success and the Tripod

Because of the great interest shown in all matters relative to the principal piece of our apparatus—the camera itself—insufficient attention appears to have been given to the tripod. This important accessory does not, therefore, enjoy our esteem to the extent it merits, and as a result its significance is often overlooked.

Many photographic pictures are destroyed in what is equivalent to the embryo stage, owing to the tripod being unstable or otherwise faulty. These brief notes are concerned with the care and attention necessary for the efficient working of the metal telescopic stands, since these have almost completely ousted the wooden folding device from popular favor.

Before proceeding further it is necessary to detail a few of the attributes that should be possessed by every tripod which has to perform field and general service. A prime consideration is, of course, rigidity. To test this, the stand should be extended and normally set up, and the tripod-head gripped in the right hand. Then downward pressure should be applied, and an attempt made at the same time to twist the stand without moving the feet. If the tripod so tested shows movement at the joints it should be rejected.

The next detail for examination is the fully extended length of the tripod-legs. Many subjects require a high viewpoint, and, for this reason, a short stand should not be countenanced. The low viewpoint, occasionally required by certain subjects and conditions, is very easily obtained by not extending the telescopic legs to their fullest extent.

The next point to consider is the weight of the accessory. This should be as small as possible; but care should be taken that the lightness is not achieved at the expense of either or both of the foregoing details. Except in those models where it is made to turn through 180 degrees or so, the tripod-head should be tight and firm. When first purchased, the telescopic sections of the legs should open and close very easily, and no trouble should be experienced through the safety catches sticking fast in the tubular rods.

Unfortunately, it often happens, after the tripod has been in use for a short time, that the original condition of the working-parts suffers a change which calls for attention. The telescopic rods may have become bent or dented, and refuse to slide with the ease which first characterised the operation. The safety catches may have become caught up and fail to perform their necessary function, and other troubles may have been set up. All of these conditions tend to affect the making of the photograph, and should therefore be avoided.

To obviate most of these troubles it is only necessary to use care in opening and closing the tripod-legs, and to bestow certain attentions upon the movable parts at intervals of a month or so. On no account should the legs be forced out or jammed back, for such treatment renders them likely to bend or buckle—either of which defects is sufficient to prevent the damaged leg being properly closed. The projecting spring catches, which prevent the collapsing of the fully extended legs, should

also receive adequate attention when closing the tripod. In opening the legs, each section should be extended separately, care being taken to observe that the safety catches are operating effectively. This precaution reduces the risk of accident occurring after the camera has been attached. When closing the legs, the lower sections should be sheathed first, and the spring catches depressed with the thumb to allow the telescopic action to proceed. On no account should force be employed here, for this expedient is apt to dislodge or injure the springs which control the safety catches.

The camera itself is best affixed when the tripod-legs have been opened, but before they have been splayed or spread out. By holding the three legs in the left hand, the camera, held in the right, can be affixed with the utmost despatch and security. A piece of thin leather, or kid-skin cut from an old glove, should be firmly attached to the head of the tripod, and no scratches or indentations will manifest themselves upon the covering of the camera.

Another measure which is effective in preventing injury is to cover the lower extremities of the tripod-legs with thin crêpe rubber; this effectively prevents sliding movement when the apparatus is erected upon a smooth surface, or when the legs are spread to any great extent. The pieces of rubber may be affixed with rubber bands or pieces of string; if carried in the waistcoat pocket they will be conveniently to hand should emergency arise.

Periodically the tripod should be thoroughly cleaned. It should be completely extended, but, unless there is damage present which calls for it, the tripod should never be taken to pieces. The first task is to clean the legs with old pieces of cloth damped with household ammonia. If the legs have been attacked by sea-water, which occurrence is very probable during the holiday season, a 10 per cent. solution of washing soda should take the place of the ammonia. The soda-solution should not, however, be used to clean aluminum tripod-legs, since it attacks the metal. In this case, the ammonia method should be persevered with, and a liberal application of the liquid made while rubbing.

When thoroughly cleaned, the legs should be well dried, and a single drop of light mineral lubricating oil applied to each of the spring safety catches. Finally, the legs should be well rubbed with a soft cloth slightly sprinkled with the same oil. This treatment, taking as it does only a few minutes of the photographer's leisure time, is well repaid by the efficiency and safety that result.

GEOFFREY BYRON in *The Amateur Photographer*.

By the Way

THE progress of our lives rarely goes at such a pace as to rob us of a sense of stability. Although we move, we carry so much with us that we are but faintly aware of the movement. As we progress, we shed our failings in the gentlest progression; and though we never "arrive", yet we do not feel that we have fallen short of the station.

We are blessed with a kind of imperfect contentment, which permits us to stop by the way and to admire things which are not our final aim. We are conscious that even a through road leads through somewhere; and we tarry, if only for the sake of the happy implication of a duty to go forward.

I think it must be for some reason of the kind that we always seek an element of restfulness in our pictures. We do not want them to be smugly satisfied. We know them to be but an act of looking about, a hesitation, a pausing on the road. We do not want them to be a final stop; yet we seek some degree of passivity in them. If all the lines go rushing headlong, we instinctively say that the picture is not complete. We say that it is not restful; but we mean that it is not true.

Lost balance of this kind offends us as much as a too perfect balance offends us; for the perfect balance marks the final goal, and the picture has not yet been made whereof the elements are so pure as to justify the perfect balance.

The essence of this restfulness is that there should be a bean beneath the soft pillows of the photographic princess's couch. There must not be perfect ease; but there must be an element of it. The picture itself, if it be successful, voices the element of ease, of a pause by the way. It tells of a philosophy which says that unless you stop, you may forget that you are moving, a philosophy which says that you may even forget to move. It holds a peculiar kind of balance in the very restfulness itself; for it sets against it an impulse to go forward.

An example of a picture—so-called—which lacks this proper element of restfulness is the ordinary panorama. The example happens to be particularly useful for my argument, because if ever there was a picture which forgot to stop, then that picture is the panorama. Visually, it ceases at the frame; but that is only an accident; it might have gone on and doubled its length, or it might equally well have stopped some inches before it reached the frame. The panorama is a perfect example of the pictorial progress which has forgotten that it moves.

Now, if you give the panorama a very strongly-marked point of interest, and vest in it the saving grace of perspective, if you do anything to stop that headlong rush of the lines, then the panorama will begin to look more like a picture, because it will not be so violently progressive. You will have made it restful, and have given it, in some degree, that sense of completeness which, although it is not a conclusion, is at least a climax.

Our lives are "rounded-off", not as a whole, but in every part; and it is this which justifies our acceptance of the work of art.—J. GARNETT HARPER, in *The Amateur Photographer*.

Light and Shade

THE average snapshot photographer, and particularly the beginner, appears to care but little for effects of light and shade, says a writer in *The Amateur Photographer*. So long as the subject to be pictured is well-illuminated—as most instruction-books tell him it must be—he is content to expose, though he may not be content with a flat and lifeless result, such as one is sure to get if shadows, as well as lights, are not taken into consideration. "How ugly that building is", a lady is reported to have said when looking through a portfolio of engravings with John Constable. "No, madam", was the reply of the artist, "there is nothing really ugly. I never saw an ugly thing in nature in my life—for let the form of an object be what it may, light, shade, and perspective will always make it beautiful." Rembrandt was perhaps the first master who made a general use of light and shade as a main factor of his work, and photographers of a generation ago were crazy for the so-called Rembrandt effects, though one hears little of them as such today—camera-men having re-christened them. Shade reveals a form, indicates relief, and is called for in most photographic subjects; it gives *texture* to architecture, roundness and "life" to a portrait, and richness and depth to landscapes.

XUM

OUR CONTRIBUTING CRITICS

A SUMMER FROLIC — I. A. MURPHY

THE PICTURE CRITICISED THIS MONTH

Whoever sends the best criticism (not over 200 words) before the last day of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below. Criticism should be helpful and courteous.

Mr. Murphy has produced an action-picture so spontaneous in its nature, and so well planned and executed that we cannot but admire his work.

That the subjects were moving when the photograph was made is clearly evident. Ability of a high order is necessary to make a picture of technical and artistic merit under such conditions. Moving objects are constantly changing position in relation to themselves and to the camera, and when as in the present instance, a dog is one of a group, skill is required to make a successful portrayal.

Evidently, the author of "Summer Frolic" had to wait patiently, camera in hand, for the moment when the figures on the beach formed a pleasing group, take advantage of the psychological second, and click the shutter without delay. If anyone thinks that it is easy to make a good picture under such conditions, let him try.

If these are the circumstances in which the photograph was made, as the print seems to indicate, the effort is praiseworthy, and I congratulate Mr. Murphy.

ARTHUR L. MARBLE.

How cool and inviting the "Summer Frolic" looks! Having tried to catch the ephemeral swirl and swish of the ocean-wave I know that, for an amateur it is a somewhat difficult subject. Perhaps a faster lens might have pictured the curl of the wave before it broke; but even as it is, the picture represents a realistic bit of old Neptune in one of its quieter moods.

The balance of the figures and the dog is very good and the shutter clicked at a very opportune moment. The tones of the sand are subdued and free of glare and the faint foot-prints relieve the monotony of the sand's smoothness; also, the misty shadows on the mirrored portion of the beach lend a happily pleasing and diverting note to an otherwise sharply triangular division in the picture. Too, they suggest that the picture was made against the sun, another feat that has tempted and defeated many a struggling amateur.

Altogether, it is a pleasing and refreshing summer fancy and one that suggests freedom from posing.

ETHEL V. MOYER.

If the maker of the picture is acquainted with the ladies and the dog in this picture, I can easily see how it might serve as an interesting souvenir of the "good old summer-time." It was probably a snapshot and the figures not posed. As such it is excellent.

I think, however, that the figures would seem better placed, if about half an inch were trimmed off from the

ALONG THE LITTLE TENNESSEE OSCAR MC ELHANEY
YOUR CRITICISM IS INVITED

bottom. Probably a little more exposure would have given more distinctiveness to the dog's face—the dog is really the focus of attraction—and the moulding of the bathers' limbs would be brought out better. The heads of two of the ladies coincide with the horizon-line, which is unfortunate, but perhaps could not be helped in the circumstances. Perhaps a higher position of the camera would have given a better combination of the figures. Nearness to the camera gives the figure at the right a rather awkward perspective. To my eye, however, there is a bit of a sloping horizon. If so, it is a serious fault. E. L. C. Morse.

This is a typical example of the seashore-snapshot and has little pictorial merit. It seems more of a genre than an attempt at out-door-portraiture. Its best feature is its story-telling quality.

Mr. Murphy evidently snapped it on the spur of the moment and paid very little attention to composition. The diagonal division line of shore and sea is almost a necessity.

To make a good group a certain amount of posing is necessary. In this case, the three bathers, filled with life and fun, fell naturally into their arrangement. They probably were not camera-conscious.

The group is deficient in clear detail owing to under-exposure of the figures. Sand, sea and sky are so vibrant with light that human figures produce a darker tonality than that seen by the eye. Low-toned values, in these circumstances, can be helped toward clearness only by a long exposure and a small opening.

One might think that a quicker exposure would have produced a better result, but it would only have produced more detail in the motion of the water, a rather unimportant factor, and the faces could have easily stood a longer exposure.

Arthur H. Farrow.

"A Summer Frolic" is a pleasing composition and a charming interpretation of that type of carefree abandon so peculiar to the beaches of Summer vacation-days. Considering the absence of any attempts at posing, the figures are admirably grouped, even our canine friend contributing variety and sharing wholeheartedly the spirit of fun.

The nearest bather and the dog being the chief objects of interest with the other bathers further away and less conspicuous with all their attention riveted on the dog, form a very pleasing artistic triangle, very difficult to reproduce at the second of action, because, had any of the figures been looking towards the camera the whole effect would have been spoiled.

As artistic composition is very elusive in speed-work, the result here shown is excellent as each bather's position is in harmony with the prancing of their barking enthusiastic playmate, and the variety is forcibly brought to the attention of the observer.

There is very little to criticise as what might have been a bare foreground is immensely relieved by the fortunate presence of those reflections, not even the dark bathing-suits marring the evenly balanced tone of the picture. James Bell.

XUM

OUR ILLUSTRATIONS

WILFRED A. FRENCH

THE frontispiece, this month, represents the artistic skill of the widely known and distinguished travel-lecturer Burton Holmes. Fortunate are those who, having enjoyed his personally conducted visits to foreign lands, remember what they have seen and heard; for then they are well prepared to appreciate the original objects and scenes when they shall travel thither.

Ever since Mr. Holmes engaged in foreign travel, he has made his own photographs, always displaying innate artistic taste in the selection of his subjects. Being obliged to cover a large amount of territory in a limited period of time, Mr. Holmes is not always able to give as much time as he should like in composing his pictures; but having attended most of his travelogs during the past thirty years, I may say that rarely have I been disappointed as regards the artistic and technical appearance of his pictures. Of course, it is possible that during the process of making and coloring his lantern-slides, which is done by high-class experts under his personal supervision, Mr. Holmes may suggest certain modifications as appears to have been done in the case of "Amalfi from the Pergola", an enlarged reproduction of a contact-print from the original 3¼ x 4¼ negative. In the projected hand-colored lantern-slide the intense shadow observed on the roof of the pergola appeared to have been considerably lightened. It is not easy to photograph successfully, from within a landscape far away, as in this view of Amalfi, on the sun-beaten coast of Southern Italy.

It is not often that an habitué of a motion-picture theater (a kinema, as the English briefly term it) has the opportunity to study a single picture, on account of the rapidity with which it is projected on the screen. But our contributor, Mr. Neblette, presents three such views, pages 176, 177 and 179, which may be examined with unrestricted deliberation. Among other things, the observer may note the artistic ability shown in the setting and arrangement of these intensely interesting scenes, the superbly effective illumination and the excellent photographic technique. Visitors to Egypt will recognise the lack of evidences of age in the seated figures before the Egyptian Temple. The general public prefers to see a reproduction of a biblical scene as it was originally; hence the absence of any sign or evidence of simulation in the pictures. We are supposed to be witnessing an episode that happened several thousand years ago, and the illusion in the "kinema" is perfect.

Mr. Douglass gives ocular proof of his theory regarding the individuality of certain trees, particularly those in which he and his brother artists are interested. Of the three which he portrays by means of the camera—on pages 181 to 183—"My Redbud" appeals to me the most strongly. The tree has been separated from the background in an artistically pleasing manner by judicious focusing. Then, too, the delineation is sufficiently clear to enable one to recognise the character of the tree, and to appreciate the author's ideas regarding tree-portraiture. The other two pictures also serve to explain the author's theory of interpreting the individual peculiarity of trees.

The simulated satisfaction of the little colored girl about to consume a large slice of watermelon, page 186, has been ably interpreted by the camerist. If this anticipated gastronomic delight is shared by the beholder, he may forget to notice that the consumer required unusually large hands to grasp the enormous morsel which occupies considerable space in the picture.

Data: April, 1925, 2 P.M.; instantaneous; Eastman roll-film; pyro; enlarged on Bromide P. M. C. No. 2, Contrast; Brownie Camera with fixed-focus single achromatic lens provided with portrait-attachment.

The title of the unwilling model, page 187, certainly fits the picture. Pretense is not in the boy's vocabulary. "Play fair!" seems to be his motto, even though he dislikes to have his "pitcher took".

Data: Made in studio, Weston, Ontario; March, 10 A.M.; daylight; 14-inch Dallmeyer lens; at F/5.6; 3 seconds; Agfa Portrait-Film; Rytol; enlarged on Wellington Cream Crayon Rough.

Profitable subjects for architectural photography are presented by Charles A. Harris in connection with his illuminating article, "Example of Constructive Art in Business". His photographic illustrations, pages 189 to 191, are extremely praiseworthy for their rare technical excellences. Nothing finer of their kind has ever graced the pages of this magazine. The rich and uniformly clear tonal values constitute a striking merit of these interesting photographs. Data will be found in the article.

"New York at Night", page 196, represents nothing new in night-photography. The print received Honorable Mention in a recent Beginners' Competition, because of its unusually fine technical qualities. An examination by the observer likely to neglect to study Mr. Haase's effort will reveal real interest and evidences of well-nigh perfect photography.

Data: July, 1926; 9 P.M.; Ica camera; Hekla lens F/6.3 at F/6.3; used at full opening; 20 seconds; Agfa Film Pack (Packfilm); Rodinal; Azo print.

"The Street Shower", page 197, the most meritorious of the Honorable Mentions in the "Pictures of Children" competition, speaks for itself. Its novelty of conception, admirable arrangement and eminently successful technique make an appeal to the most discriminating of observers. The pictorial composition is specially noteworthy, the boy standing on the hose, at the right, and with his back turned to the camera, is an inspiration, in that he balances the entire assembly of youngsters enjoying the fun.

Data: Made July 19, 1926; 4.30 P.M.; bright sun; 5 x 7 Eastman Par Speed Portrait Film; elon-pyro; 8½-inch Turner Reich F/6.8; at F/11; 1/100 second; contact-print Azo F, No. 2.

A similar picture of this sailing-vessel, by F. W. G. Moebus—page 200—but a smaller reproduction, appeared in PHOTO-ERA several years ago. As I said at the time, the artist deserves credit for being alert in capturing this type of vanishing craft. The position of the vessel, the lighting and spacing are all that can be desired. No data.

XUM

An Unique Lamp-Shade

ALMOST everybody is familiar with the glass positives in natural colors, projected upon the screen in the optical lantern, or displayed as transparencies in the window and illuminated by daylight. As not many makers of these fascinating pictures of natural scenery, sunsets, flower-gardens and still-life, are in a position to show them to friends in an effective and convenient way, other than to place them, one at a time, against a sheet of groundglass and in front of a strong light, or in a frame made for the purpose, they are led to lay them on the shelf where they are soon forgotten. It is to make these neglected or rarely shown color-creations a source of perpetual joy in the home, that the photographic lamp-shade, described on the Editorial page of this issue, came into being. Although the average photographer is gifted with a certain degree of mechanical skill, and is probably equal to the task of making his own Autochrome Lamp-Shade, it may be well to outline the simple method that occurred to me when the idea of this device first entered my mind.

The first plan is to use from four to six 5 x 7 upright Autochromes, or as many as there are to be sides to the lamp-shade—one Autochrome for each side. To this end—in the case of a four-sided shade—the area of each side should measure 7 x 10 inches, the material used to be japanned tin, or several 10 x 14 ferrotype plates, black or chocolate, or, better still, very thin sheets of aluminum or brass, although a working-model can be made of stiff cardboard. As the available (visible) surface of a 5 x 7 Autochrome or Agfa color-positive measures about 4½ x 6½ inches, the combined width of free space at top and bottom, will be nearly three inches, which may be divided and allotted *ad libitum*. The display-opening will be 6¾ inches high and 4¾ inches wide. Grooves for the color-plate to slide into (from the top) and a base to rest upon, are to be provided from spare material, that has not been cut away, by leaving about ⅛ inch at each side, and the same at the base of the opening to form the necessary shoulder and lip for the plate (having one cover-glass) to rest upon. When the plate has been inserted, it will extend about ⅛ inch above the opening, and, to hold it in place, a small turn-button directly at the top and one each at the two sides (on the inside) are to be attached. After all the sides or surfaces with their respective openings and grooves have been completed, the two ends can be soldered together to form the four or more sided lamp-shade. The maker will then construct—or obtain ready-made—the base with the requisite number of arms to be fastened to the bottom of the display-frame. Finally, the free surfaces of the shade can be decorated or covered with fancy material to suit the taste of the worker, an artistic fringe probably forming the finishing-touch at the bottom. Or, instead of using pliable, opaque material, one may prefer some stiff, translucent medium, like tinted parchment, and spend his ingenuity providing the necessary openings, grooves, etc.

A larger and possibly more satisfactory lamp-shade, however, may consist of two horizontal 5 x 7 or 4 x 5 color-plates placed, one above the other, on each side of the square or polygon-shaped frame, which permits the simultaneous display of eight or more color-plates, and these can be replaced by others at will. The source of illumination, a 50-watt electric bulb will suffice; otherwise a more powerful one. If danger from overheating should be apprehended, each color-plate may be protected by a cover-glass at the back, and the grooves widened accordingly. In a five or six-sided lamp-shade, the source of light would be farther removed from each color-positive and the illumination a little less brilliant.

With a display, day or evening, of objects radiant with color, which no painter may hope to excel for beauty and truthfulness, the owner can offer his friends and visitors a source of visible pleasure at once unique and unsurpassed.

W. A. F.

Easy Lessons in French

A CORRESPONDENT, member of the Hypo Club, northern New York, and, by the way, as conversant with the French language as a new-born infant, is imbued with a desire to see Paris, asks us to give him the French for "Nothing doing", and a few other equally serviceable expressions. "No frills", he adds, "just the equal in French, word for word." Just as you say, my friend. Here you are!

Nothing doing! "*Rien faisant!*"
Fifty, fifty, "*Cinquante, cinquante*".
You have nothing on me, "*Vous avez rien sur moi*".
My cigar has gone out, "*Mon cigare est sorti*".
Have a cigar! "*Avez un cigare!*"
He is some photographer, "*Il est quelque photographe*".
That's going some, "*C'est allant quelque*".
How do you get that way? "*Comment devenez-vous cette façon?*"
Do you get me? "*Procurez-vous moi?*"
I get you Steve! "*Je vous procure, Steve!*
What are you giving us? "*Quoi êtes-vous donnant nous?*"
How do you feel? "*Comment touchez-vous?*"
How come? "*Comment venue?*"
He gets my goat, "*Il procure ma chèvre*".
What's the damage? "*Quel est le dommage?*"
Sure thing, "*Sure chose*".
I have had a good time, "*J'ai eu un bon temps*".
So long! "*Si long!*"

No doubt, some kindly soul on the transatlantic journey will be glad to help our ambitious friend to pronounce these simple words; but exactly what effect they will produce upon those to whom they will be addressed, is problematical. Our erudite critic, Mr. Morse, undoubtedly would give considerable to be present to enjoy the varied expressions of wonder, doubt, consternation, amusement, and glimpses of eventual comprehension reflected in the faces of the kindly natives. However, the offer of a cigar of surprisingly high quality, or the giving of a generous tip, is eloquent in itself, and no words of explanation would be needed.

A Pardonable Error

IN looking over the first proof of the "Beginners' Competition", September issue, I noticed that the word "Kine" which occurred in my reference to Mr. Dolfi's interesting rural scene, had been set up as "kiné". It was easily corrected. Like other employees of our printer's large and busy establishment, this compositor had shown a strong personal interest in the magazine. If he is a practical photographer, he may show a decided predilection for kinematography and, in his opinion, "kine" should be "kiné". Is not the accent usually omitted in such well-known words as café, frappé and moiré?

Misunderstood

Music-Critic (to sweet young thing)—"How did you like the barcarolle at the musicale last night?"

Sweet Young Thing—"I didn't stay for the refreshments, Mr. Cleff."—*Life.*

XUM

ON THE GROUNDGLASS

WILFRED A. FRENCH

The Use of the Dash

CORRECT punctuation in writing is not so easy as it may appear. Practising it according to one acknowledged authority may not be conclusive, for another guide may differ on certain points. Besides, punctuation has only recently undergone a change in that it makes for simplicity in the use of certain marks—the comma for instance. No mark is abused so much as the dash, although so high an authority as Francis Kingsley Ball (author of "Constructive English") deprecates its use in separating clauses and in the place of the adverb, "namely", or the Latin equivalent, "viz."; yet many good writers persist in this habit.

A common fault is to place the dash before, instead of after, the conjunction, "and", as in the phrase, "He approached the well—and fell in." Here, and elsewhere, where the unexpected happens, the dash should follow "and". The appearance of the printed page is often spoiled when, for lack of space, the dash—used to set off the name of the author or the source of a quotation—is misplaced. Here are specimens of what may often be seen in a hastily printed newspaper or carelessly printed book:

"..... ,"
..... "
—*Boston Herald.*

"..... ,"
..... "—
New York Herald.

"....."—Longfellow.

"..... ,"
..... "
—*Washington Star.*

"..... "
..... "
—*Boston Globe.*

The critical observer will recognise the absurdity of the position of the dash in the foregoing examples of composition or typesetting, and appreciate the correct way:

"..... "—*Boston Globe.*

To place the dash before "New York Herald", as I have seen it done frequently, would tend to make the paragraph look even worse. How much better, by far, is the custom adopted by intelligent publishers of books, magazines and newspapers, viz., to omit the dash altogether, and place the name of the source directly under the quoted paragraph, unless there is room in the last line to accommodate the entire credited source including the separating dash:

"..... ,"
.....
Boston Herald.

Excellent examples of this style will be found at the head of Chapters II and III of "Constructive English", by Francis K. Ball, and—PHOTO-ERA MAGAZINE.

A Cheerless Home.

WHEN calling, not long ago, on Mr. X., a member of the Union Camera Club and a young pictorialist of great promise, I was disappointed in the appearance of his home, a brand-new eight-room apartment, in Cambridge. He is unmarried and lives with his parents. "Come right into my room," he said the moment I entered. He conducted me hurriedly through a spacious parlor, past living-room and chambers whose doors were ajar, into his room which served the triple purpose of den, study and bed-room. As no one but my friend appeared to be at home at the time, I could not help noticing that everywhere the walls were bare. Not a sign of a picture or ornament was to be seen! The only exception was X.'s personal abode, which contained a fairly good number of photographic prints mostly his own work. He informed me, quite on his own volition, that before moving into this ultra-modern flat, his people stored every picture and ornament they owned, because, as he expressed it, they wanted to be "up-to-date", and no pictures, statuary or bric-a-brac was the "proper thing"! "How about portraits of members of your family?" I ventured to ask. "Oh yes", he replied, "we have them, including a superb portrait of my mother painted by Burdick, also an enlargement of a successful picture I made of my sister, at the Camera Club—all stored with the rest!" He then explained, somewhat reluctantly, that there was no interest, no encouragement, manifested by any member of the family in his one, great hobby—photography. He had really to fight to be allowed to have pictures in his room, which, however, was to remain closed when he was not occupying it. To visitors or callers, no room in the apartment was supposed to contain a picture of any kind. All the same, his mother and sister did visit the Camera Club's annual show in Union Hall, last spring. That was partly because the *Globe, Post* and PHOTO-ERA contained complimentary notices of his exhibit, of which he was quite proud. He also remarked that the absence of visible pictures in the apartment, ever since they occupied it, seemed to have a depressing effect on every one; but then they were conscious of the fact that they were indulging the latest caprice, and appeared to glory in it, particularly when they had callers. Friend X. was rather inclined to agree with his family in their hobby, "no pictures in the home", and to tell them so; for personally, and silently, too, he dreaded the voluble representations of a certain young moron painter who appeared to have made a favorable impression; for with even one such crime against art in the apartment, or even in the storeroom, X. declared he would quit and live elsewhere, by himself.

Before I left, I assured X. of my sincere sympathy and support, so long as he at least maintained his present artistic standard in pictorial work. Here is a kind of difficulty probably never imagined by the amateur worker, and one which I sincerely hope will be rare. Sooner or later, X. may get married and, unless Mrs. X. favors the senseless fad of a pictureless home, pictorial bliss will prevail in that family.

THE AMATEUR KINEMATOGRAPHER

HERBERT C. McKAY, A.R.P.S.
Director New York Institute of Photography

The Amateur Kinematographer

WHILE England probably leads all European countries in the use of sub-standard motion-picture work, the Continent is rapidly closing in upon the Island Empire. There are new miniature cameras announced almost monthly in Europe. These cameras seem to favor the split standard film, that is 17.5 millimeters wide with unilateral perforations although gauges of 16 mm., 9.5 mm., and even 6 mm. have also appeared. The tendency seems to be toward a cheaper instrument, as the prices prevailing for the cameras of American manufacture make their use prohibitive except to the very wealthy.

Another tendency noticed in Europe is that of using small cameras to make single pictures upon standard motion-picture film and upon standard unperforated motion-picture film. This is a good sign, for this field offers a very interesting study. I have been using a Sept camera for this work for six months now and find that it is everything that could be desired, although in actual practice I find that 4 x 5 is the largest direct enlargement possible, if the finest detail is to be preserved. For 5 x 7 I find the linen-surfaced papers and the slightly rough surfaces give very good results; but for record-work I find that 8 x 10 enlargements may be made only upon rough-surfaced papers. In order to obtain a fine, enamelled surface record-print with the utmost detail, a roundabout method should be used. This consists in making an enlargement upon a slow lantern-plate, then by contact a duplicate negative is made in this size, and from this the final enlargement is made. The definition is quite good enough for this work and the direct enlargement is only rendered impossible by the silver-grain showing up. The extremely fine grain of the lantern-plate aids materially in this work as does the sharp contrast and the absence of all tendency toward halation. I wish to recommend this work to all those readers who own a standard gauge motion-picture camera which has the one-to-one movement.

Many owners of Pathex cameras do not like the title-easel because it does not lend itself to making art-titles. In this case a good procedure is to make use of the portrait-lens. If this lens is used, titles upon 10 x 12 cards are readily photographed. In centering this card the finder must not be used. The camera may be opened and a fragment of ground film placed in the aperture for arrangement, or measurements may be taken to insure that the center of the card lies in the lens axis. In the latter case, extreme care must be taken to see that both card and camera are level.

There is a wonderful opportunity just now to organise amateur photo-theatrical clubs. Such an organisation could, by making comparatively small assessments upon the members, purchase a complete outfit including camera, projector, lights and accessories. Such an organisation has a tremendous advantage over the old amateur theatrical clubs in that it offers an opportunity to those members who incline toward scenario writing. The motion-picture is even more firmly established now than the stage ever was. We should not confine our interest in motion-pictures to the strict photographic phase. No photograph is ever preserved unless the subject is worthy of preservation. The photo-dramatic organisation offers the means of producing films which will be treasured and shown time after time. If such work is begun at this time, the club will be just nicely going when the dull weather of late autumn and winter arrives, and the winter is preeminently the time for such efforts. If you do organise such a club, we should all like to know of the full details. Just write and tell us the whole story. If you find yourself confronted by any insurmountable obstacles, I shall be very glad to help you in any way possible. Just send your inquiry addressed in care of PHOTO-ERA MAGAZINE and I shall be more than glad to answer it immediately. Such a movement should produce a new school of scenario-writers, actors, directors, cameramen and technicians. We have the Little Theater movement before us as an example. It has had a profound influence upon the stage of today. Let us then go forth and do likewise.

Color-Films Easier on Eyes

PEOPLE who have had to miss the movies because they hurt their eyes may go in perfect comfort to the colored ones that are being developed today. Prof. Leonard T. Troland has made a study of both kinds of movies and gives the colored ones a clean bill of health.

"Some persons still insist that motion-pictures hurt their eyes in spite of the fact that the vivid black and white contrasts of the early motion-picture and the unsteadiness on the screen and the flickering projection have now been eliminated," Professor Troland said. "Experience has shown, however, that eye-strain is much less for the average sensitive observer after seeing colored pictures.

"The more natural pictures are, it seems that the easier it is for the oculomotor system to make the images appear as they should", Professor Troland explained. "In black-and-white pictures violent contrasts often have to be used in order to get the effect of depth and reality, and such contrasts tire the eyes. Colors on the other hand express contrasts in a harmless way and also improve the truthfulness of the pictures."

When motion-pictures in colors were first introduced about fifteen years ago annoying fringes of red and green on the edges of moving objects disturbed the enjoyment of the pictures, and critics said that they were much worse for the eyes than the black-and-white performances. The trouble was that the red and green components were not photographed simultaneously and the effect was a doubling of the image on the screen which the eye-muscles struggled to make into one again. This upset the normal balance of what Professor Troland calls the ocular reflexes.

The fringing and double-image defects in natural-color movies have been overcome in recent years, and the modern pictures are quite free from them. Professor Troland says that sensitive people feel so much less strain now from the colored pictures that they often close their eyes entirely to the black-and-white-portion of the films.

XUM

A Solution to the News-Kinematographer's Problem

THERE is probably no man in the motion-picture industry who is called upon to face more trying or hazardous situations than the News Kinematographer. His exploits in putting current events into motion-pictures are replete with thrills and adventures that, in themselves, would be ideal material for photoplay "thrillers". These men are constantly at their posts, many of them stationed in sleeping quarters equipped with police and fire-alarm bells. Consequently, when big news breaks, they are on the spot as quickly as the police, firemen, reporters and others who are indispensable at the "big scenes".

The paramount requirement at such a moment is *speed, speed* and MORE SPEED. To this requirement the

THE BELL & HOWELL EYEMO

seven-pound automatic Eyemo professional camera came as a blessing. It eliminated the tripod, burdensome carrying-cases and luggage which were associated with the heavier types of standard motion-picture cameras.

The problem of *portability* solved, the next objective has been to give the "firing-line boys" all the photographic flexibility which they had learned to expect from the larger cameras. Once on the job, and ready to shoot, it is up to the camera in use to produce any or all effects which may enhance the news or commercial value of the film.

The Bell & Howell Company, who gave the profession the Eyemo Camera out of their experience in making professional machines, now announces a new feature which will slow the motion down one-half when film is projected at normal speed. With this new mechanism the Eyemo operator can make pictures at the rate of 32 per second to gain the slow-motion effect, or simply by shifting a lever, photograph at the normal speed of 16 exposures per second.

This range of adjustment is a very valuable supplement to the former Eyemo speed-range of 16 to 8 exposures per second, or from normal to half normal. The newer speed-mechanism can be fitted to any Eyemo Camera now in use, or if preferable, can be obtained in a camera of the same design. With these two mechanisms the Eyemo is ready to cover virtually any assignment in which a portable automatic camera would be used in preference to the larger cameras.

That it has many fields of usefulness, even superiority, is proved by its records already made in various fields. For example, Eyemo is used by International, Pathé, Fox, Kinograms, Universal, Paramount and other leading Newsreel producers to "scoop" many of their pictures. Famous Players-Lasky, Warner Bros., Mack Sennett, Universal, Metro-Mayer-Goldwin, Charlie Chaplin, Christie and others use it to obtain stunt shots, special effects and testing locations in professional productions.

Among the epoch-making exploring-expeditions which were Eyemo-equipped are: Byrd Polar, Amundsen-Ellsworth Polar, Speejax, Bering Sea, Third Asiatic, Smithsonian-Chrysler to Africa, African and Mongolian of the American Museum of Natural History, and the U. S. Department of Interior Geological Survey.

The most recent activity of Eyemo is "putting the neighborhood in the movies"—the new idea which local exhibitors are rapidly taking up. And in all these activities the value of Eyemo will be greatly enhanced by the new speed-feature which gives it a thoroughly professional range. Particulars may be had by addressing the editor, or the Bell & Howell Company, 1808 Larchmont Avenue, Chicago.

The Camera Afield

THE actual process of making the exposure seems quite simple after all of the exposure discussion we have just been considering, but you will find that you must use this knowledge to determine the exposure or depend upon guesswork. Except for the exposure to be given, in this case the size of the diaphragm to be used, there is little choice in the actual camera-operation.

The essentials in motion-picture work in the substandard gauges are camera and film. Most of the modern cameras may be purchased with a motor-drive which makes possible the use of the camera without a tripod. However, the tripod may be numbered among the most important accessories of the amateur kinematographer, and no serious picture should be attempted without it.

Other accessories which should be taken into the field include, a dependable exposure-meter such as the Cinephot—Yellow screen—auxiliary short-focus lenses, if the camera is not of the focusing-model—notebook—also such sundries as a small ball of string, chalk, visual filter and so forth.

When ready to make the exposure, that is, when you have reached your pre-determined location, the first thing to do is to set up the camera. If there is not a partially exposed roll of film in it, the camera should be dusted out with a soft, camel's-hair brush. Then and only then is it to be loaded. Before closing the camera do not fail to give the crank a pull to see that the film is properly feeding through its proper channels.

(*Continued on page 221*)

What is Light?

LIGHT is the mental reaction to the stimulus of the retina when vibrations of certain frequencies impinge upon the retina. These vibrations are transmitted through the medium of the other. Ethereal vibrations may be of any magnitude and any frequency, but only those lying in a certain "wave-length" band affect the retina. This band is composed of practically one octave ranging from wave-length .000068 centimeter for the red to .000042 centimeter in the violet. The yellow rays which have a wave-length of .00006 centimeter have a frequency of 500,000,000,000,000 per second. The frequency of any vibration may be found by dividing the velocity by the wave-length. The velocity is 30,000,000,000 centimeters per second.

What is Color?

COLOR is light of a single frequency or a combination of frequencies which does not embrace the entire visible octave. It will be noticed that light and color have no existence *as such* outside of the brain. In Nature they are merely small bands taken from the universal scale of ethereal vibration. This fact will aid us in understanding the sensitivity of photographic emulsions.

How Does Light Affect the Photographic Emulsion?

THE first requisite is an image-forming lens which will be discussed later. It has been found that every mass responds in some manner to vibrations. The vibrations of radiant energy which closely approximate the visual band have the property of effecting a physical change in many substances. The fading of wall-paper is an example. Certain compounds of silver are profoundly changed by being subjected to the influence of these vibrations for an extremely short time. This makes it possible for us to give instantaneous exposures in photography.

cal rather than a physical one. After this internal strain is set up in the molecule the action of a weak reducer will cause the separation of the haloid from the silver, and metallic silver is left behind while the haloid goes into combination with the reducer. The number of molecules affected within a given area depends upon the intensity of the vibration. This in turn depends upon (a) the initial intensity and (b) the length of time during which it is allowed to act.

It will be seen that development as a reducing compound will result in the deposition of metallic silver in direct ratio to the intensity of the light which fell upon the emulsion. To obtain the proper effect it is also evident that the intensity be controlled so that in no place is all of the available silver-halide affected, but that the area of greatest effect should approach the maximum.

What Vibrations Affect the Emulsion?

THIS depends upon the emulsion used. The ordinary emulsion is but slightly affected by any wave-lengths below the bluish-green; but by certain methods of control the emulsion may be made sensitive to the lowest visible red rays. The ordinary emulsion and, in fact, all emulsions are sensitive to extremely high ultra-violet rays. In fact, if glass were not almost completely opaque to ultra-violet rays we should have many color-values so greatly distorted that photographs would be most unpleasant. By the use of quartz-lenses a greatly increased amount of the ultra-violet may be used, and in some cases this results in the possibility of extremely short exposures; but the photographs are often anything but attractive. In using such a lens, the subject must be chosen with great care. All ultra-violet waves may be "screened" out by the use of colored filters.

XUM

How May Light be Controlled?

LIGHT may be controlled as to (a) intensity, by the means of shutters. Shutters are instruments which are opaque; but which are so arranged that they may be opened for a pre-determined period, allowing the light-waves to pass freely. (b) direction, by means of surfaces which change the direction by reflection and by means of transparent bodies which change the direction by refraction. Reflection is uniform in direction regardless of the reflecting-surface. That is, the angle of the reflected ray with the surface is always equal to the angle of the incident ray with the surface, and these angles are in opposite directions. The change in direction due to refraction depends upon the refractive power of that substance. This power is given an arbitrary numerical value known as the refractive index. When the wave-band passes through such a substance and into the air again it resumes a direction parallel to its original path through the air *provided* the surfaces of the refracting-medium are also parallel. If the surfaces of the refracting substance are not parallel the wave-band or "light-ray" travels a path which is bent toward the thicker portion of the substance.

What Control of Light Direction is Used in Photography?

REFRACTION. The refracting substance used is principally glass. This glass is in the form of a uniform, circular and concentric prism, whose axial surfaces are parallel and which is known commonly as a lens.

Is the Emulsion Sensitive to the Light Effect of Vibrations?

IT is not. Photography is made possible only because the vibrations which affect the emulsion are practically coincident with those which produce a visual effect. This may be demonstrated by the facts that the ordinary emulsion is not sensitive to red light which strongly affects the retina, and that such emulsions are most strongly affected by the ultra-violet waves which have no visible effect whatever. This is a distinction at first thought without a difference, but a little thought will show that without this distinction our theory of photography falls flat. If all waves except those of the ultra-violet region be screened from an object, an instantaneous photograph of that object could be made in total darkness! Thus we see that light as a visual phenomena has only a coincidental relation to photographic sensitivity.

What Changes Take Place in the Emulsion Incident to Exposure?

THIS is not absolutely known. There is no apparent difference between the exposed and the unexposed emulsions. Theoretically, the change may be described thus:

The sensitive material in the emulsion is a silver-halide. This is a stable compound which is not broken down by subjection to a weak reducing compound. The molecule may be said to be of regular, substantial form. When subjected to the vibration of light-waves the molecule is changed in a manner somewhat analogous to the change produced in other substances by sound-waves. As a sound-wave of the right frequency will break glassware, so we may say that the light-wave "cracks" the molecule, although the change is a chemi-

XUM

(*Continued from page 218*)

In the case of the Pathex this is not necessary, as the film automatically places itself, but in all sprocket-cameras this must be done.

The camera is then placed upon the tripod. Regarding this tripod, it may be said that the motor-driven camera may be used with all satisfaction upon a light tripod, but the hand-drive camera must have a heavy tripod. In fact the Victor Ciné Camera in the hand-driven model uses a very good plan in having both standard and M. P. Standard sockets. I have used one of these cameras upon a light-weight professional M. P. tripod and found the combination ideal to make rock-steady film, although the combination was a trifle heavy. In general, it may be said that the light, tubular tripods may be used successfully with the motor-driven cameras, but the hand-cranked model should never be used upon anything lighter than the 8 x 10 sliding tripod. The reason for this is obvious. The motor-driven camera needs only a steady support to maintain a level horizon-line, but the other camera must bear the pull and thrust of the crank, and the tripod must be rigid enough to withstand this.

With the camera mounted and ready to crank, it is time to give the subject some attention. Of course, subjects may be of any nature; but usually any subject will be found to belong to a large class, and of these classes there is no great number. The treatment accorded the different classes of subjects will vary according to the required exposure, which has been treated. It will vary as regards composition. Composition in motion-picture work is a serious problem. In the first place let us consider composition in motion. The only type of deliberate composition in motion with which we are in any degree familiar is the ballet and allied forms of art. Thus we may regard the military drill as the geometrical design upon which the flowing composition of the ballet is founded. If we are to make use of composition in motion we must have a corps of thoroughly drilled actors. Nor is this desired. Such formal motions cannot represent the spontaneous motion of natural life. It is as blatantly artificial as the beautiful but formal "design" photographs which we see in Salons. Formal composition is essentially emotional. The subject, *per se*, is of small moment. On the contrary, in motion-picture work, the subject is, in itself, the principal part of the picture. So we must come to the conclusion that composition in motion should be disregarded.

In still work the photograph is a unit. Nor can a still photograph approach perfection unless this principle of unity is rigidly followed. Foreground, middle distance, background and incidental figures must blend into a harmonious whole. In the case of the motion-picture we have quite a different set of controlling conditions. In this case we have two distinct parts of any picture. First, we have the stationary objects in the scene, the setting. This is auxiliary to the moving objects, but an essential one. So, it is in connection with the setting that our knowledge of composition must be used. It seems absurd to try to utilise the laws of composition in regard to only a portion of a picture, but this is true only because we have become accustomed to the conventions of the still art. Just as still photography cannot be judged by the laws which govern the other graphic arts, so the motion-picture cannot be judged by the laws governing still work. In the still photograph the figure is a part of the whole. It is stationary and must play its part in the general design, but in motion work the figures, by reason of their motion are completely divorced from the setting, and inevitably the motion-picture must be a duality rather than a unity. Thus we may see that even if we introduce composition in motion we still have duality, for while the group may maintain design in regard to its component parts, it is evident that this design will not always be in harmony with the design of the setting. Artistic unity, then, is neither possible nor desirable in motion-pictures. In fact we circle about until we come back to one of the earliest truths which confront the serious kinematographer. The motion-picture is and ever must be a new art, sprung from the older graphic arts on the one hand and from the drama on the other. Whether it must continue to be called a hybrid with the stigma of such a designation, or whether it must be regarded as an altogether new art is a question which is out of place here.

Finally, the treatment will vary according to the lighting. This is in regard to direction rather than volume. In still photography, lighting is juggled in order to create various impressions, but in motion-picture work the lighting is used to enhance the effect. The same thing? Not at all. The artist uses his lighting in still work to accentuate the emotion which he wishes the picture to produce. It is an accessory of art. It is manifest. It is a part of the picture. On the contrary light in itself has no place within the motion-picture; only its effect is needed. This distinction is rather confusing at first, but it must be understood before the still artist may become a motion artist. In still work we may make a photograph of a young mother reading to her children, the light from a shaded lamp streaming over her face and the group, and the light itself visible as a halo. The rest of the picture is dark. What is the effect? Peace! It will make a beautiful picture, if the materials are properly handled. Now let us make the same picture upon motion film. What is the effect? We wonder why a family should be gathered in a dismal, dark room with a brilliant spotlight falling upon them! The first place is one in which the lighting plays an emotional rôle, but in motion-pictures we expect the light to reveal just what we should see if we were in the position occupied by the camera. True, we have freak lightings in motion-pictures, but always the lighting is used only because of its effect upon the subject.

On the whole, lighting in motion-picture plays three important rôles. It gives the necessary illumination, which may be said to be its basic purpose. It gives, as a local effect, the pseudo-stereoscopic effect which we call roundness, and as a general effect the corresponding pseudo-stereoscopic appearance of depth, atmospheric depth. The two last phases are often lumped together and called relief. This is not proper. In the local effect, we have the reflections, high-lights, and shadows falling in such a pattern that we get the effect of modeling. So startling may this effect become that we have called it by that name, modeling. This gives definite form, rotundity, and even in a more detailed manner, texture. It is essentially a phenomenon of three dimensions. It counterfeits mass. On the contrary, in atmospheric depth, we have a phenomenon in which the dimension of depth is represented by successive planes. The difference might be objectively demonstrated by laying upon a table a ball, and behind this a series of cardboard sheets, one behind the other. The difference will be brought home to you when you find that some of your films have superb atmospheric depth with the foreground figures as solid as if cut from paper, or on the contrary when you get beautifully rounded figures plastered upon a background in which a range of hills twenty miles away becomes a series of any hills a yard or so behind your actor.

(*To be continued*)

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THE MILITARY PHOTOGRAPHER

CAPTAIN A. H. BEARDSLEY, SIGNAL—RES.

The Air Corps Technical School, Chanute Field

ALTHOUGH unavoidable circumstances made it impossible for me to take a course of instruction this past summer at the Air Corps Technical School, my interesting and helpful experiences of last year made such a deep impression that I shall always have a sincere interest in the school. Through the *U. S. Air Corps News* published at Chanute Field, I keep informed of the activities at the post; and, as a familiar name appears, I remember the courtesy and kindness which was extended to me. Therefore, I take especial pleasure to reprint an article about the Air Corps Technical School which gives credit where credit is due; but really does not say all the good things which can be said of the officers and enlisted men at Chanute Field. I shall now let Captain Falk Harmel, Air Service Reserve, proceed with his interesting article.

"Practically the entire educational system of the Army Air Corps, as it affects its enlisted personnel, is carried on at the Air Corps Technical School at Chanute Field, Rantoul, Ill. Although the various courses of instruction given at this school are confined mostly to enlisted men, a limited number of officers avail themselves of advanced courses of instruction in such subjects as *aërial photography*, armament, communications, and so forth.

"Chanute Field is situated on the edge of the village of Rantoul and is approximately one mile from the Illinois Central Railroad station. Rantoul is one hundred and fourteen miles south of Chicago, on the main line of the Illinois Central. It is but seven miles north of Champaign and Urbana, Ill., the latter place being the location of the University of Illinois. At Champaign, railroad-connections can be made to Indianapolis, Ind. The Illinois State Highway, Route No. 25, furnishes concrete highway-road connections to Chicago, points south of Rantoul, and also through Champaign and Urbana with Indianapolis and points to the east, and with St. Louis and points west. Eight trains on the Illinois Central, four northbound and four southbound, make stops daily at Rantoul.

"It is doubtful if there are schools anywhere else in this country which afford vocational training of such a thorough character as that which can be obtained at Chanute Field, particularly in such a brief space of time as six months. The Technical School is one of the reasons that the Air Corps is such a desirable and popular branch of the service to the man who enlists in the Army. Men with very little or no mechanical training, with no vocation to carry them through the battle of life, come to the school and depart six months later fully qualified to follow one of such vocational pursuits as *photographer*, radio-mechanic, radio-operator, airplane-mechanic, aircraft-armorer, auto-mechanic, engine-mechanic, carpenter and so on.

"As is natural to assume, the purpose of the Technical School is to train enlisted men along various lines of mechanical pursuits incident to the operation of the Air Corps; this in order to promote the highest operating efficiency possible. The lives of the Army airmen depend on the thoroughness and skill of air-plane and engine-mechanics, and the best men in that line of work are not too good in that connection. Nothing better can serve to bolster up the morale of the Army flyer than the knowledge that his airplane is in the hands of a thoroughly trained and skilled mechanic.

"That the Air Corps Technical School is a popular institution may be deduced from the fact that, as a general rule, enlisted men making application to attend it pay their own way to Rantoul, both coming and going. Some are fortunate to be able to avail themselves of airplane-transportation; others are not so fortunate but cheerfully pay their railroad-fare and the necessary subsistence en route. Not infrequently, enlisted men graduating from one of the courses at the school come back again, either to pursue the same course along advanced lines or an entirely different course.

"It may well be assumed, even by the uninitiated, that when enlisted men go to such lengths as to pay their way cheerfully out of their meager savings to take a vocational course, the school must be really worth while.

"There is no room for triflers at the school, and, as a matter of fact, instances of men "soldiering on their job" are rare. The men realise that there is serious business ahead of them and go at their various tasks not only with cheerfulness and willingness, but with a determination to succeed.

"The instructors at the Technical School are, for the most part, civilians. They are a high class of men, eminently well qualified to perform the tasks allotted to them—in fact, experts. Practically all of them have been with the school since it was first established. It appears that there is a fascination about their jobs which they cannot resist; first and foremost, there is that deep satisfaction of putting through the different courses a constant stream of earnest, willing and determined men whom they know are bound to succeed in life; then there is the realisation that their work is not of the humdrum kind, but that some new device, some new invention, some new way of doing things crops up ever so often and holds their interest.

"The Commanding Officer of the Technical School is Major William C. McChord, Air Corps, who assumed command on June 30, 1924. Major E. A. Reinburg is the Executive Officer and Captain Charles B. B. Bubb, Adjutant."

Long-Distance Photography

THE plans which are under way at McCook Field, Dayton, Ohio, by the Engineering Division of the Army Air Corps, for long-range photography, will not be completed before the end of the summer, at which time, after several test flights, an effort will be made to photograph the city of Detroit from an airplane flying at a high altitude over Dayton.

With a certain new lens, a camera is being developed which will make photographs from an altitude of 30,000 feet, completely out of sight of the ground; yet, when the photograph is developed the size of the picture is the same as though it had been made from an altitude of 10,000 feet.

LONDON LETTER

CARINE AND WILL CADBY

It is the holiday month here, when most of the photographic activities are taking place out of London. The big exhibitions are looming ahead next month and workers are busy getting their material.

The weather has on the whole been kind to photographers and given them all the variety needed for pictorial landscapes, from still, golden days full of atmospheric quality, to times of sensational contrasts of lighting, with a sky piled up with dark and brilliant clouds. At least, this has been our experience in the North, and although we are spending this month in the Lake-district, so noted for its gray and rainy days.

Cameras are much in evidence, and on August 1, our general holiday, the usually lonely top of Helvellyn was alive with photographers, also snapshooting on the razor-like Striding Edge, the most precipitous descent. These lakeland mountains, none of which rises much above 3,000 feet have a majesty and attraction all their own, and among them pictorial work is far easier than in the Swiss Alps. There is always an atmosphere, and seldom are clouds absent, whereas often in Switzerland, with its rarified air, perspective is lost in the absolute clearness, and the mountains often show a hard and cut-out looking edge.

There are two photographic problems which these holidays have left unsolved. The Kinema-people have failed to agree about the films and the quota. One amusing incident in this deadlock was the remark made by one of the distributors, "It is all very well", he said, "talking about jealousy and the ban on British films. We all want good films and the only ban on British is their poor quality." It seems to us just waste of time meeting to discuss a question that lies in a nutshell; until the English film-producers can get their hearts high enough to spend the money, we cannot hope to compete in this direction with other nations.

The other problem, also a professional one, is that of free sittings. Rather like the Kinema-people, the Committee arranged by the Professional Photographers' Association to discuss this subject has not made much headway. Indeed, it is a thorny one and difficult to tackle, as one member who had been called to task remarked, he must be free to manage his business in his own way, and be free to meet competition. If his rival descended to such unsportsmanlike tactics, he must be able to beat him on his own ground.

Mr. Speaight's articles in *The Morning Post* are now to be published in book-form called, "Memoirs of a Court-Photographer". He finished them with a flourish, and in his last chapter tells us how he secured that now famous portrait of the Duchess of York and her baby. Mr. Speaight is the first photographer to get a photograph of the youthful Princess Elizabeth and such a good one too. As the Duchess is immensely popular in England, he arranged for the portrait to be published in all the newspapers simultaneously. It was also transmitted by wireless to New York. Another miracle of photography was the showing of five of the photographs which were made at the same time as a Kiné-film in most of our big Kinema-theaters; but how this marvel was achieved from five "stills" is beyond our imagination.

Just when photographic exhibitions have arrived at the idea of uniformity in framing, and pictures have to be sent in on white or light mounts, there has been held in London an exhibition, not of photographs or paintings—but of frames. Messrs. James Bourlet have demonstrated at 17 and 18 Nassau Street the present-day developments of framing, and although these are intended for paintings, they offer useful suggestions to the pictorial photographer, which, if carefully adapted, might make the places of good work more secure on our walls by harmonising them with their surroundings.

It is good news to learn that the gilt frame of commerce, lavishly ornamented, and uncompromising in its relations to both the picture and the wall, is now almost a thing of the past, although unfortunately it is likely to greet us on many walls for many years to come. The aim of this exhibition is to make the frame not only sympathetic to what it contains, by picking up the note of the color-scheme of the picture, but to make it an harmonious feature of the decorative effect of the whole room. To this end, Messrs. Bourlet have studied old examples in many collections, all over the world.

It would be good if photography had its Messrs. Bourlet who would seek out and experiment with color-schemes and tints and frames, so that pictorial photography might hold its own as decorative art in any position, the print, the mount and the frame all harmonising with each other and their surroundings. At present, when a photograph does secure a permanent position, it usually has an alien and apologetic appearance, suggesting the poor relation of the arts. This, we have often thought, is almost entirely due to its "dress". But clothe it sympathetically for itself and suitably to its surroundings, and it would certainly stand a better chance to hold its own aesthetically.

The British Association, which has been called the Annual Fair of British Science, was opened this year at Oxford by the Prince of Wales. In the Zoölogy-Section was exhibited what is probably a unique photograph. It was made by using the eye of a glow-worm instead of the ordinary camera-lens. The projection on the screen was about eight inches across, and showed a fairly clear and quite recognisable portrait. The eye of the glow-worm, we are told by Dr. Eltringham, has perfect sight, measures only one-fifty-thousandth part of a square millimeter and one cannot help thinking that it would have been interesting if a second photograph had been made, using a very fine pinhole as the lens, and the two results compared as to width of angle, focus, etc. We are told that insects' eyes have thousands of lenses and even more nerves, and one marvels at the ingenuity, perseverance and skill that must have been needed to successfully carry out this experiment. All of which testifies to the increasing service which photography is rendering to the study of natural history.

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—SECOND YEAR—

SPECIAL PHOTO-ERA TROPHY CUP

To Be Presented To The Organised

American or Canadian Camera Club

Whose members win the most prize-awards in the PHOTO-ERA monthly competitions during the months of September, 1926 to June, 1927, inclusive.

THE OBJECT

To stimulate increased activity among members of organised camera clubs in the United States and Canada and to encourage the establishing of new camera clubs

Read the Conditions and the Rules

1. Any member in good standing of an organised camera club or photographic society in the United States or Canada is eligible to compete for points for his club, in addition to receiving for himself the usual prize-awards.
2. The club or society of which he is a member must be a regular subscriber to PHOTO-ERA MAGAZINE.
3. A handsome solid silver cup (valued at $50.00) and suitably engraved will be presented to that camera club or photographic society whose members win the largest number of prize-awards in PHOTO-ERA monthly competitions—Advanced and Beginners'—during the months of September, 1926 to June, 1927, inclusive.
4. The PHOTO-ERA TROPHY CUP may be retained by the winning club for one year. It must then be surrendered should another club win the cup. However, when a club wins the PHOTO-ERA TROPHY CUP three times—not necessarily in successive years—the cup will then become the permanent property of that club.
5. In case of a tie, a special competition will be held to determine the winner.
6. Each month the score will be printed in PHOTO-ERA MAGAZINE so that all may know the standing of the various camera clubs or societies.
7. IMPORTANT. Those who wish to score points for their own camera club must write the name of their club plainly in all communications, on data-blanks and on prints. Otherwise proper credit cannot be given.
8. Each prize-award will score one point. That is, there are five prizes altogether to be awarded each month in both competitions. If members of the same club should happen to win all five, their club would be credited with five points. If not, the club would be credited with one or two points, depending upon whether or not any of its members received a prize-award. *Honorable Mention awards will not be credited.*
9. Our regular competition rules will apply to all prints submitted.

PHOTO-ERA MAGAZINE

WOLFEBORO, NEW HAMPSHIRE, U.S.A.

(Seattle Camera Club Winners of Cup, 1925-1926)

PHOTO-ERA MAGAZINE the Blue-Book of Photographic Advertising

HERE, THERE AND EVERYWHERE

To ensure publication, announcements and reports should be sent in not later than the 5th of the preceding month.

The P. A. of A. Convention at Chicago

THE forty-fourth annual convention of the Photographers' Association of America was held in the Colosseum, Chicago, August 23 to 28, 1926. As has generally been the case, the educational features were eminently excellent. The display of portraiture and commercial work was unusually large and of the highest quality. To ensure a large attendance, photographers not members of the Association and the general public were admitted by paying one dollar, although last year the fee was ten dollars.

The principal attraction was Marcus Adams, F. R. P. S., the famous child-photographer of London, England, and retiring president of the Professional Photographers' Association of Great Britain and Ireland, who had been specially invited by the Executive Committee to be the guest of honor at this convention. By means of his kindly and charming personality, breadth of vision and complete knowledge of his art, Mr. Adams made a delightful impression and endeared himself to one and all. "A man of pure gold!" was the expression used by many who had talked with him and formed a high opinion of his ability and character. Their estimate of Mr. Adams corresponds with that of the writer, who visited him at his wonderful studio in London, in May, 1925, and was entertained by him. Mr. Adams addressed the convention once on "The Adventures of a child before the Camera", with the aid of lantern-slides, and, again, on "A Heart-to-Heart Talk with Employees", revealing information of great practical and æsthetic value.

Other prominent speakers were William Hollinger, veteran portrait-photographer of New York—"Fifty Years on Fifth Avenue"; William D. Poynter, of Cincinnati—"Portraiture in the Home"; Louis Dworshak, of Duluth—"How to Photograph Business-Men"; William H. Towles—"Balance of Light and Shade"; Miss Virginia Whittaker—"The Ifs and Buts of Photography"; Walter Scott Shinn—"Business and Speculative Solicitation" and "The Control of Children making Work a Pleasure"; Henry G. Heffner—"Hitting on All Six" (a description of photographic business-methods).

The Commercial Program was brilliantly interesting and was replete with attractions of exceptional interest. It embraced talks on important practical topics by eminent experts including William T. Barnum—"Photographing Mosaics"; C. W. Howson—"Photographing Textiles".

Although not announced to speak, Goldensky, veteran portraitist of Philadelphia, and Eugene Hutchinson, of Chicago, addressed the convention by invitation. The convention as a whole was a success, but the attendance somewhat dissappointing—owing, no doubt, to present business-conditions, and high costs of travel and hotel-accommodations. State conventions also seem to satisfy the needs of many photographers who failed to attend.

A subject of special consideration was the circularising of photography. This advertising-proposition, for which, much money and a special secretary will be needed, should interest every professional photographer in this country, as he will be the direct beneficiary, for it means more photographs—more business for him. He will be asked to state how much he will contribute out of his business to help ensure the success of this important enterprise. As an encouragement, Mr. F. B. Jones, of the Eastman Kodak Company, offered to contribute $50,000, if a like amount were raised by the photographers.

WILFRED A. FRENCH.

Two-Edged Protection

ALTHOUGH we could wish that it were otherwise, it is rather difficult to believe that manufacturers of cameras in this country will derive great advantage from the increase of the duty on foreign cameras from 33⅓ to 50 per cent., which has been sanctioned by the Finance Act, 1926, says *The British Journal* editorially. For at the same time that this measure of protection has been granted, it has been taken away in part by the levying of a duty of 50 per cent. upon component parts of cameras, such as shutters, which previously came in duty free, or at any rate paid only an insignificant duty. Inasmuch as shutters of foreign manufacture are largely used in making up British cameras, the cost on this account becomes greater, and it would not surprise us to learn that when the new duty on component parts has had time to make its effect felt, the advantage derivable from the increased duty on complete foreign cameras will be found to be negligible. If that is so, the total result will be that cameras, both home and foreign, will cost more, with corresponding effect upon sales. Meanwhile trade is hampered by disputes as to what is and is not a "component part". We hear that a metal tripod is—quite rightly—not a component part; whereas the wooden stand of a studio-camera is held to be a component part of the latter. By the same section of this year's Finance Act it is also provided that the duties imposed on goods under the Safeguarding of Industries Act of 1921 shall continue in force for a further period of ten years from August 19, 1926, subject to the modifications and additions which we have just mentioned in their application to goods sold in the photographic trade. As everyone knows, a duty once imposed is more likely to be permanent than to disappear or be reduced, and thus it is difficult to anticipate any fiscal changes which will contribute to cheapening photographic apparatus.

Visual Education

FOLLOWING the brief intimation made in these columns a few weeks ago, particulars now reach us from a Rochester paper of the very thorough series of trials to be made of the use of kinema films in elementary schools as a supplement to the existing system of education. This movement has been started by Mr. George Eastman, and has received the very careful consideration of a special committee created for the purpose some four years ago by the National Education Association, a body existing in the United States for the advancement of educational methods. As a result of conferences with the Eastman Kodak Company, the committee has decided that the trial of kinema films shall be limited

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for the time being to fourth, fifth and sixth grades of the public national schools, and to six subjects, viz., geography, health and hygiene, civics, fine and practical arts, and general science. Some of the highest educational authorities in America have been recruited in the working-out of a program to make educational films relating to these branches of knowledge, and the school-authorities in ten towns have been selected to use and report upon the films to be issued. During this period of experiment, the Eastman Company, without charge, will lend these schools the various sets of films, and provide the necessary apparatus to show them. The schools, on their part, undertake to make reasonable use of the films, and to co-operate with educational committees in determining their value, their defects, and how they may be improved. The whole plan has been worked out in a way which will not interfere with the regular curriculum of a school, but will provide the necessary conditions for investigating the degree of success with which motion-pictures may be employed in elementary education. The ultimate aim of Mr. Eastman is to establish the motion-picture as a really effective educational agency, which means, in turn, the provision of a film-library in every school, with projection-apparatus, at a price which it will be feasible for the schools to pay out of their normal resources. It is clear from the committee's report that this most desirable program has been embarked upon with a full recognition of the special problems which it involves, and it may be confidently hoped that the happy collaboration of the Eastman Kodak Company with those practically engaged in education will be successful in promoting this most profitable application of the kinematograph.—*The British Journal.*

Inventor of Halftone-Plate Is Given Gold Medal

FREDERIC E. IVES, inventor of the halftone printing-plate, received a gold medal from the Printing-House Craftsmen's Clubs at their seventh annual convention, held recently in Philadelphia.

Before the advent of the halftone, illustrations were limited to the laborious and expensive "wood-cuts", and such a thing as a picture of any event in less than a month after it occurred was impossible.

A Little Bird Story

HAVING for the past few years devoted considerable time to the study of the various strange birds to be found in the country of Clubland, I have been asked by your Educational Committee to describe one of them for the enlightenment of some of our newer members, so that they may recognise and deal with him in the proper manner.

One of the more common of the birds to be found in Clubland is the *Kicker Bird*, readily distinguished by his habit, as indicated by his name, of constant kicking and fault-finding. Whatever is done by another—no matter how good the intention or how well done—is immediately subjected to unfavorable criticism, long and loud, by the Kicker Bird.

One species of this variety of bird avoids criticism of his own work by the very simple expedient of never doing anything. When asked to take an office or head a committee, his evasion is that "he isn't looking for any honors", or "he wants to be just a plain member, no better than anyone else".

Another species can occasionally be coaxed into acting as a committee head—and, as such, does fairly good work—but at the slightest breath of disapproval, often on the part of another Kicker, or friendly, well-meant advice, the Kicker Bird rolls over on his back, stretches his legs, and quits. Any word or act of another may be picked up by the Kicker and turned and twisted by him into a criticism, existing only in the mind of the subject of this article, and used by him as an excuse for his quitting act.

Unfortunately, the law does not permit the extermination of this pest by hitting it on the head wherever and whenever it appears. About the only remedy for the evil is a total disregard of its activities.

Hyp O. Alum.

This article is not copyrighted and may be used by anyone who thinks it worthy of reprint. And we don't care a rap whether we get credit for it or not—BUT, as the *Kicker Birds* shown above are not members of our organisation, please don't write asking us to lend them to you, for it can't be done.

EDITOR in *The Ground Glass.*

Amateur Kinema League to Have Pioneer Directors

FURTHER steps to make the Amateur Kinema League a permanent organisation for the mutual entertainment and benefit of the 20,000 amateur movie-makers throughout the United States and some foreign countries have been taken by Hiram Percy Maxim, noted inventor of the Maxim silencer, who was named temporary chairman of an organisation committee at a recent luncheon in New York City. Mr. Maxim was then empowered to appoint an organising committee of nine members, known as the "Board of Pioneer Directors", to effect a definite organisation.

Some Observations from Our Friend Mr. Blacar

DEAR MR. BEARDSLEY:

WE all know that many, when letting off the shutter-release, are apt to wiggle themselves all over, and so spoil the pictures. I was looking at a man lately who was winding his watch; and, at every turn of the winding-crown, his head and shoulders *wabbled* surely one-half inch. Try it on some friends and watch them. If they don't wabble ask them to wind faster.

I see every month in the PHOTO-ERA MAGAZINE two pictures, and under one it says, "This is the *picture* criticised this month", and under the other "Your criticism is invited". These statements seem to refer to the *pictures* only and not to the makers' difficulties in making them.

If a picture is bad because the viewpoint was too near then we may say so, and as to whether the maker could have chosen a better viewpoint we don't know or care. It would be only guess-work on our part to say whether the maker was incompetent or not. It is the picture—the result, that we are asked to criticise as I understand it.

The roughest criticism that you can give a picture is to try to tone down your criticism so that it won't hurt the feelings of the maker.

Then take the question of constructive criticism. Seems to me as though it were just guessing as to how the picture was made and then guessing as to what were the circumstances in which it was made and then without *knowing* anything about it tell the maker how he should have done. What is the difference between constructive and destructive criticism? I look at a picture and say that it has too much foreground or I may say that it should have less foreground. Same thing, only expressed a little differently.

Why not confine our criticism to the *picture* and when we criticise just say what we think in plain English.

As the old ship-carpenters used to say "Hew to the line and let the chips fly where they will".

An old Hebrew once appeared to an office-helper and said, "Isaac, you have been with me twenty-five years and I now make you one leetle present", and laid down a photograph of himself. As Ike said nothing the old Hebrew asked, "What you think of it?" and the reply was "It's just like you".

WILLIAM H. BLACAR.

Two Governors Act for Their Own Movies

PROFESSIONALLY, John H. Trumbull, of Connecticut, and Alvan T. Fuller, of Massachusetts, are governors of two rival New England states; but as amateurs they are the essence of companionability. As amateurs, they have both gone into the movies. They have joined the ranks of several thousand Americans who have gone in for the new sport of making their own movies for home-entertainment.

Both state-executives have adopted their miniature movie machines as constant traveling-companions, and they are bringing home lifelike, animated records of their friends and of places they visit.

When Hiram Percy Maxim, the inventor, recently initiated the movement for the formation of the Amateur Kinema League, he naturally invited Governor Trumbull, his intimate friend, to join. The governor immediately replied: "I am greatly interested in amateur movies and will be very glad to assist in any way I can in furthering the movement."

The primary objects of the Amateur Kinema League are to enable its members to exchange home-made films with each other for temporary showing, to publish a magazine devoted to advice on amateur kinematography, to writing simple scenarios for amateur production and other matters of mutual amateur interest.

The Edinburgh Photographic Society

THE Edinburgh Photographic Society is to hold its Sixty-fifth Annual Open Exhibition. The closing-date will be January 29, 1927. A special feature of the exhibition will be the new class, "Commercial Photography". It is to be an international exhibition and our Scottish friends cordially invite us to send a large and truly representative collection of pictorial and industrial pictures from the United States. Further particulars may be obtained from Mr. Gilbert Cousland, Honorable Exhibition Secretary, 117 George Street, Edinburgh, Scotland.

New York Institute of Photography in New Quarters

SINCE moving the first of this year into their new and greatly enlarged school in the Waldorf Building at 10 West 33rd Street near Fifth Avenue, New York City, the attendance at the New York Institute of Photography has steadily increased. The number of new students matriculated during June for the summer-session is greater than any month in the sixteen years that the school has been in existence. The students registered from foreign lands is an indication of the world-wide reputation enjoyed by that institution. Recent enrollments are from twenty-four different states and from Porto Rico, Japan, Republic of Panama, Hawaii, Australia, Newfoundland, Ceylon, China and India.

The Brooklyn Institute of Arts and Sciences Department of Photography

THE Photographic Department of the Brooklyn Institute of Arts and Sciences announces three courses in Photography for the season of 1926–1927: A Course for Beginners on fifteen Tuesday evenings and a Course for Advanced Workers on fifteen Tuesday evenings under the personal direction of William H. Zerbe.

A Course in Pictorial Photography, Composition, and Portraiture on thirteen Thursday evenings and seven Saturday afternoons will be given by Miss S. Louisa Lauffer, A. R. P. S. All courses begin October 5, 1926. The enrollment for these classes last season was the heaviest in the history of the Photographic Department. Indications at the present time are that this year's enrollment will surpass that of last year.

For full particulars write to The Brooklyn Institute of Arts and Sciences, Department of Photography, Academy of Music Building, Brooklyn, New York.

The Pictures in Our Contributing Critics Department

To the Editors of PHOTO-ERA MAGAZINE:

I don't want to take up too much of your space or to seem to thrust myself too much into the limelight; but I can't agree with what MR. A. H. Farrow says in your September issue about criticism of pictures and the character of pictures presented for criticism in your paper. He says, "Our personal contention is that the type of pictures submitted for criticism has not been the most suitable for the purpose. Most of them seem to be of the ordinary snapshot or record type, and very little serious thought was given to either artistic or technical treatment".

To me the chief virtue of the prints submitted for criticism is that they *are* of the snapshot variety and that their faults or excellences are very obvious and easily comprehended. Were they masterpieces, I, for one, should never have a word to say about them.

Criticism in art does not necessarily mean fault-finding. Properly understood, it means an appraisal —an evaluation, if you like that horrid word—of effort to express an idea. In the critical pages of PHOTO-ERA MAGAZINE I have seen some very warm encomiums of amateur work. Some of it has seemed to me wonderfully good—and some of it woefully bad.

I rather think the critical page of your journal is perused by many people with considerable interest. I was at a photographers' meeting not long ago. I had forgotten to get a card from a professional friend. The meeting was for professional photographers only. I thought I'd have a try at it anyhow. "Are you a professional photographer?" "Sorry to say I am not." "Sorry to say you can't be admitted." I handed the secretary my visiting-card and said I wrote occasionally for PHOTO-ERA MAGAZINE as a critic. "Oh, are you the man? I have often read your criticisms. Glad to meet you. Present this slip to the doorkeeper and walk right in." I say this, not to exploit my own humble personality, but to show that the critical pages of PHOTO-ERA MAGAZINE, as Mr. Farrow says, are very widely read.

E. L. C. MORSE.

Sept. 13, 1926.

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THE PUBLISHER'S CORNER

A Little Service We Render Gladly

PERHAPS most of our readers have no idea of the amount and variety of correspondence which finds its way to the shores of Lake Winnipesaukee and the Publisher's desk, then, out again into all parts of the world. That mouse-trap story attributed to Emerson or Elbert Hubbard certainly applies to PHOTO-ERA MAGAZINE and the way correspondents and visitors make a path to our door. We are sincerely glad that all this is so; but we likewise realise that our responsibility is the greater. In short, to merit continued attention and goodwill, our efforts to serve must ever be first in mind.

In this connection we wish to mention that, at times, we make special mention of this or that in our columns because we sincerely believe that our readers will be interested or ought to be informed. When we know of something that is really worth while, practically or inspirationally, we print it. We may miss some things or mention others of only moderate interest—we are not free of human frailties—but we do state positively that our intention always is to serve and to benefit our readers, subscribers and advertisers.

In the advertising-pages of this issue will be found an advertisement which has to do with an U. S. Army officer and some cameras which he would like to sell at a fair price to the purchaser and to himself. This is an individual problem and not to be considered on the same basis as a strictly commercial proposition. Also, there is another advertisement which has to do with the settlement of an estate and the desire to sell the photographic equipment at a fair price for the benefit of the heirs. In both cases we have mentioned the matter editorially because we wish to help in the solution of these two problems, and we know that those readers who make a reasonable offer will receive consideration and, if the sale is made, will receive reliable equipment. We might add that we receive no commission or other inducement to give this additional publicity. It is simply a little service which we reserve the right to render when, how and where we feel it will help the most.

No—There Was No Mistake

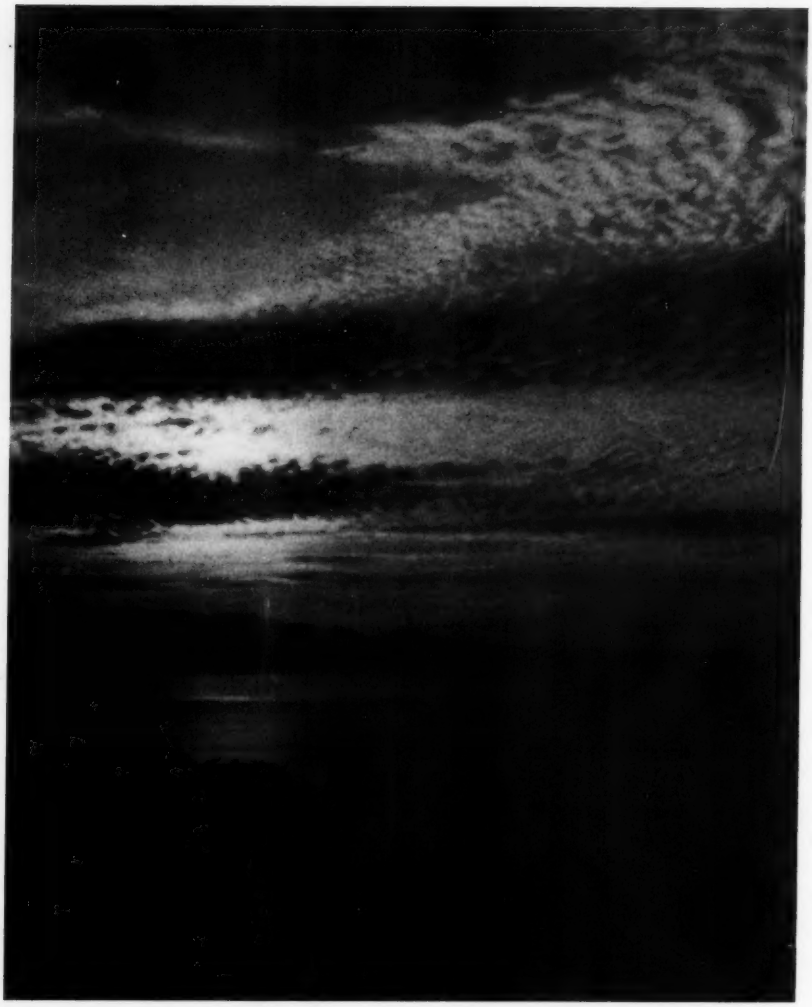
PERHAPS some of my readers may wonder why a full-page announcement appears on page 224 where there should be text. That is just it. I want them to wonder and to read that page. According to the Seattle Camera Club, the PHOTO-ERA TROPHY CUP is a prize in keeping with the magazine and the best efforts of camera club-members. Indications lead me to believe that the Seattle Camera Club will begin at once to secure its grip on the TROPHY CUP. This club has been wide-awake, enthusiastic and industrious. It fully deserves the honor of holding the TROPHY CUP for one year; and, unless other camera clubs bestir themselves, the Seattle Camera Club is very likely to win the cup permanently. However, all will not be easy sailing for the present holders of the trophy. Some fifteen camera clubs have indicated that they would be in the race to a finish, and already we are receiving prints properly marked for credit to the club of which the contestant is a member. It matters not at all what camera club wins the cup for 1926–1927. The great objective which I have in mind is to stir up club-members to accomplish some definite photographic success for themselves and the clubs to which they belong. There is a thrill to activity which is good for members and for the club. Whether the Seattle Camera Club ever wins the PHOTO-ERA TROPHY CUP again or not, it may always point with justifiable pride to a real accomplishment which was carried through to success by each member who said little but worked much. Let me urge my friends in the camera clubs of this country and Canada to renew their photographic enthusiasm, stimulate their pride in the club of which they may be a member and prove their sincerity by doing something for themselves and their club. No, it was not a mistake, the placing of that announcement on a text-page, it is a direct challenge to the progressive, well-officered and well-equipped camera clubs of the United States and Canada to accomplish something definite this coming winter.

Book-Reviews Are Coming Next Month

UPON my return from a few days of rest in a quiet little island-camp, I was confronted with a formidable array of material for review. Owing to the general disruption of routine work during the vacation-season, there was imperative need to get my desk cleared as quickly as possible. When my head eventually appeared above the pile of accumulated correspondence, pictures, manuscripts and printer's proof, it was too late to include the book-reviews in this issue. However, in the next number I hope to call my readers' attention to several important and very helpful books and pamphlets for fall and winter reading.

Who or What Is to Blame for This?

IT is reasonable to assume that there are about three million amateur and professional photographers in the United States. Certainly there are that number of cameras in use, and probably there are more. The combined circulation of all American photographic magazines, according to published statements, does not exceed fifty thousand copies per month. Why this great discrepancy between actual and potential readers? Are the photographic magazines too much over the heads of the general readers? Do they fail to interest and to hold the beginner? Should they confine themselves to pictorial photography exclusively or to optics, chemistry and technique? Perhaps the discrepancy is not due entirely to the magazines. How many of the three million are really interested in photography? How many wish to know anything about developing, printing and enlarging? How many are interested in composition? How many belong to a camera club? Who is to blame or are both responsible to a certain degree?



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